DIETARY ADHERENCE AMONG RURAL AFRICAN-AMERICAN ELDERS WITH HYPERTENSION: AN ETHNOGRAPHIC APPROACH

By

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Abstract of Dissertation Presented to the Graduate School
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DIETARY ADHERENCE AMONG RURAL AFRICAN-AMERICAN ELDERS WITH HYPERTENSION: AN ETHNOGRAPHIC APPROACH

By

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Major Department: Anthropology

This study assessed the influences of economic, social and cultural variables on prescribed dietary behaviors in chronic hypertension management among forty-one rural southern African-Americans over age 65. Despite the overwhelming prevalence of hypertension-related morbidity and mortality within this study, research efforts tend to be fragmented, interventions inappropriate, and adherence to recommendations reportedly limited.

Adherence was evaluated through a twenty-four hour dietary recall and a food frequency inventory, physicians' opinions and weight charts.

Outcomes were placed on an ordinal scale and, using standard tests of association, were correlated with Health Belief Model-based variables and others. Such variables include sociodemographic factors, treatment duration, health beliefs and locus of control, social support, medical care access and patient/practitioner relations. Instruments include ethnomedical open-ended questionnaires, the Norbeck and IPRI social support scales, and two Likert scale instruments measuring health locus of control and patient/practitioner relations.

Statistical analyses and ethnographic interviews reveal higher overall adherence to dietary recommendations than reported in most research. Nearly two-thirds of the study sample met their physicians' guidelines for weight reduction and fat intake; however, fewer than one-third successfully limited their sodium intake.

The data indicate few significant associations, probably due to factors associated with small sample size. Of the sociodemographic variables, only education has a significant positive correlation with adherence. Treatment duration is inversely related to the level of adherence. The influence of health beliefs on dietary choices is complex because study members maintain both "traditional" and biomedical health orientations and behaviors. While physicians' care was highly appraised, there was no association between dietary adherence level and assessment of the practitioner or access to health facilities. Similarly, while study participants positively evaluate social support, statistical association between adherence and perception of support was only found if the family member or friend is a health care professional. The author concludes by issuing substantive and culturally appropriate recommendations to researchers, policy makers, and health care professionals

designed to facilitate treatment adherence and reduce the risks of hypertension-related morbidity and mortality.

CHAPTER 1
INTRODUCTION

Purpose and Approach of the Study

For centuries, anthropologists have been engaged in the collection, recording, and analysis of information about various societies and peoples. In so doing, they may be testing new hypotheses or re-testing ones they believe lack validity due to cultural change or inadequate research design. Alternatively, ethnographers may seek to determine the applicability of anthropological principles or ideas to a culture with the ultimate goal of achieving "practical ends" for the betterment of people. Increasingly, contemporary social scientists have recognized the necessity of achieving such improvements by undertaking mulitdisciplinary approaches, or studying the entire "problem" or issue. Using a broad range of anthropological and other methods, I have attempted to construct a more comprehensive "ethnography of adherence" to anti-hypertensive dietary recommendations.

Like more traditional ethnographies, I have undertaken a multifaceted investigation of the possible considerations involved in health decision-making. Specifically, I have chosen to investigate factors that influence whether older rural dwelling African-American[1] hypertensives follow their doctors' recommendations on diet and weight control.

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[1] Throughout this dissertation, I alternate between the terms "African-American" and "black." While the former is generally accepted in the scholarly community, participants in my study prefer the latter. To them, "African-American" implies a direct connection to Africa evocative of

Comprehensive investigations of adherence to treatment recommendations have the capability of revealing a number of health behavior issues, including the dynamics of health beliefs and practices. Most adherence studies, however, have failed to account for multifactoral determinants of adherence behavior. As a result, researchers often report superficial results or create factually inaccurate models and images of people's health behavior. This is a particular problem with ethnic groups, such as African-Americans, whose health behavior traditionally differs from the culturally mainstream researchers who study them.

Hypertension Epidemiology

I chose to examine hypertension treatment because of its chronicity and its prevalence within this community. Chronic diseases, typically considered within the "folk" or popular domain of health behavior, are particularly amenable to anthropological research because they involve an all-encompassing perspective on life style concerns and the mechanisms of the body.

Furthermore, hypertension's prevalence among the African-American population necessitates continued and creative research approaches. Seventy-four percent of elderly[2] black women and 69% of elderly black men have been diagnosed as hypertensive, compared with 63 and 61% of their white counterparts, respectively (Health & Human Services (H.H.S.), 1986).

"primative" or "Godless". Out of respect to both communities, I have chosen to use both terms.

[2] The term "elderly" in this study refers to those over the age of 65, the age most researchers in the United States generally use to delineate senior status and the age of widespread accessibility to the uniform health coverage of Medicare.

Hypertension is defined as systolic blood pressure equal to or greater than 160 mmHg and/or diastolic blood pressure equal to or greater than 95 mmHg and/or currently taking antihypertensive medication. The disease disproportionately affects blacks' morbidity and mortality (Health Service Research Center, 1985). While 25% 19% of white males and females over age 20 are diagnosed hypertensives, 37% and 31% of black males and females have high blood pressure (National Center for Health Statistics, 1994). Despite significantly improved management resulting from more accessible screenings, monitoring, and treatment with improved pharmaceuticals, scientists still consider hypertension a major risk factor for such life threatening diseases as heart disease, stroke, and renal failure. From 1980 to 1982, for example, blacks sustained 18,181 excessive deaths from heart disease and stroke, far exceeding all other sample groups in the United States (Health Service Research Center, 1985). As Figure 1-1 illustrates, the African-American population suffers greater rates of morbidity and mortality than other population groups. African-Americans' overall death rate was 45% higher than older whites' death rate: death rates from heart disease, cancer, and stroke were 47%, 30%, and more than 50% higher among older blacks than whites.

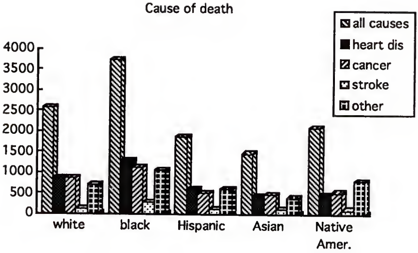

Figure 1-1: Death rates for selected causes for persons 65-74 years of age per 100,000 persons by race and ethnicity: United States, 1989-91.
Source: C.D.C. & P. National Center for Health Statistics, National Vital Statistics System and U.S. Bureau of the Census, as cited in National Center for Health Statistics, 1994, p. 32

Among African-Americans, 295 men and 185 women per 100,000 died from heart disease, compared to 236 men and 119 women per 100,000 in the white sample (National Center for Health Statistics, 1994). Finally, blacks sustain a much higher prevalence of hypertension-induced end stage renal disease than any other United States population. Figure 1-2 illustrates the result of hypertension-related morbidity on mortality rates. The magnitude of this health problem among African-Americans, demands practical, applied research.

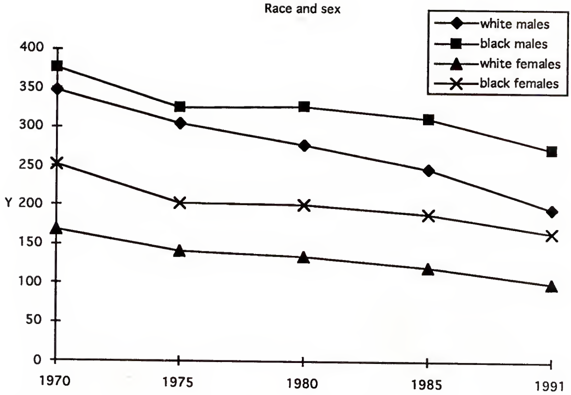

Figure 1-2: Death rates from heart disease by race and sex, per 100,000 persons: United States, 1970-1991
Source: C.D.C. & P. National Center for Health Statistics, National Vital Statistics System as cited in National Center for Health Statistics, 1994, p. 21

Adherence

Defined by Haynes, Taylor, and Sackett (1979, p. 233) as "the extent to which a person's behavior (in terms of taking medicine, following diets, or executing lifestyle changes) coincides with medical health advice," adherence to treatment recommendations is a fundamental aspect of health decision-making. My dissatisfaction with scholars' traditionally unifactoral models of adherence and subsequently inadequate conclusions motivated me to undertake a more all-encompassing perspective on the topic. Considering only one possible adherence determinant at a time (such as social support or socioeconomic status) has resulted in studies leading to a fragmented and partial understanding of adherence, plagued with inconsistencies, measurement problems, and generalizations.

Another primary reason for my interest in adherence is to understand health decision-making processes. If scholars would approach adherence studies from a more inclusive perspective, considering many potential influences on health decision-making and behavior, they could arrive at a more comprehensive understanding of health beliefs and more efficacious treatment options. Many scholars have long recognized the problems of nonadherence, finding it "irrational" or at least enigmatic for someone to undergo pain, a barrage of tests, and expensive medical visits only to ignore the doctor's recommendations; however, many of these researchers have often failed to recognize that adjusting one's lifestyle to meet the expectations of health professionals requires a patient/physician convergence of health beliefs and may involve a dramatic lifestyle change. Truly understanding these ideas and practices is essential for enhancing peoples' health status and lives.

In addition, I have undertaken adherence research after constantly encountering questionable propositions (presented as facts) that seem either counterintuitive, dated, or only partially satisfactory. For example, researchers often claim that elderly blacks fail to follow their doctors' recommendations because of their alternative health belief system (Watson, 1984; Heurtin-Roberts and Reisin 1990). First, I reject the assumption that blacks disproportionately ignore their doctor's recommendations. Second, I question solely attributing nonadherence to a different set of health beliefs. While I do not deny the very real existence of nonbiomedically standard models of hypertension among this sample, my fieldwork experiences lead me to argue that there are numerous influences on adherence decisions (Dougherty, 1976; Snow, 1977; Jackson, 1981; Chubon, 1989) and to question whether any correlation between "alternative" beliefs and nonadherence applies to this community (Blumhagen, 1980; Weidman, 1979; Randall-David, 1985).

Finally, an understanding of adherence is necessary to fully comprehend treatment decision-making to improve health for several reasons. First, if pursuing medical treatment as instructed results in improved health status, then nonadherence constitutes a barrier to well-being. Second, the prevalence of nonadherence, estimated at one-quarter to three-quarters of patients as a whole, may impede health maintenance and recovery (Meichenbaum and Turk, 1987). Without a complete and sensitive approach to this topic, researchers will continue to misunderstand this key aspect of medical treatment and offer inappropriate "solutions."

Diet

In addition to constituting an essential component of hypertension treatment, I addressed diet because it is an anthropologically interesting subject. Dietary habits tend to remain culturally determined because they are introduced early in a person's life and reinforced throughout the life span (Farb and Armelagos, 1980). Investigations reveal the traditional diet for African-Americans, one high in fat, sodium, and calories, is a major risk factor for high blood pressure (Saunders and Williams, 1975; Kumanyika and Bonner, 1985; Jerome, 1988). Other associated dietary problems within the community include low calcium, high cholesterol, and high prevalence of obesity among black women (Lieberman, 1988a). However, recent NHANES data reveal that older blacks may actually have a lower sodium and caloric intake than their white counterparts (Jerome, 1988; Lieberman, 1988b). My study presents detailed information on dietary intake and seeks to address such inconsistencies within the existing literature.

Hypotheses

After thorough literature reviews in the social and health sciences, I established multiple hypotheses to frame my research. While each hypothesis and variable will be discussed at length in its own chapter, I summarize the most important ones below.

1) Those study participants with a higher adherence level will be female, younger, more educated, have a higher income, and will have been under a physician's treatment for a shorter amount of time.

2) Health knowledge and behaviors, specifically explanatory models of illness and the level of adherence among study participants, will not differ substantially from the "cultural mainstream."

3) The role of social support in adherence will depend on the individual's satisfaction with the support he or she receives. If the participant feels he or she needs and receives adequate support, then social support will be contribute to adherence. Conversely, if individuals perceive social support as desirable but absent or undesirable and present, helping behaviors will negatively affect adherence.

4) Participants' household composition will influence adherence. Those living alone or with a spouse only will be more likely follow their physician's recommendations because they will have greater autonomy over food shopping and preparation than those living within an extended household.

5) Participants who believe that their physician is concerned about them, is knowledgeable, and provides them with quality care will have a higher level of adhere to that physician's dietary recommendations.

6) Individuals who receive the most information from their physician and whose information is reinforced by friends, family, and the media will have higher adherence levels. There will be a positive association between biomedical knowledge of hypertension and adherence.

7) Ready access to health care facilities will enhance adherence. The presence of numerous medical facilities in the vicinity affords most informants satisfactory medical attention.

Research Design

The Community

H is a small rural[3] town approximately twenty miles outside Florida's largest university. University City, the largest city in a county with 183,800 residents dominates the county in services, productive activities, and sample with 84,587 inhabitants (Almanac, 1994). H, whose economy centers on agriculture, forestry, and services to travelers passing through, has 1366 residents, of whom 20% (273) are African-American and 15% (204) are over sixty-five (Almanac, 1994).

Historically, H is an old town and, according to my participants and written sources, had its heyday a half century ago. In 1883, when Webber described H as a town that owes its existence to the railroad, H was the home of many more shops, retail and hospitality services (including two hotels) than exist today (Webber, 1883). Area residents cultivated oranges, oats, Sea-Island cotton and corn, and tapped for turpentine until the middle of the twentieth century. Cyclical freezes have led growers to abandon orange groves. Widespread commercialization of cotton and manufactured substitutes for turpentine saw the demise of those local industries. Currently, small scale cultivation of corn, peanuts, watermelon, beans and pecans remains an important part of the local economy. However, like the eight smaller municipalities that surround University City, H relies greatly on this larger city for employment and services (Opdyke, 1974). On the average, county residents travel nineteen minutes to their employment (Almanac, 1994), the approximate travel time between H and University City.

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[3] "Non-metropolitan" or rural, according to the United States Bureau of the Census includes any community with fewer than 2500 residents contiguous to a central city of over 50,000 people (as noted in Haynes, 1984).

Participant Recruitment

I selected the forty-one study participants by visiting several community churches[4] as well as the town's public health clinic. The entire staff of the H Public Health Clinic graciously permitted me to publicize my study, post sign-up sheets, and conduct numerous hours of interviews on their premises. After approximately fifteen individuals agreed to participate in the study, I recruited the remainder by word of mouth. I selected only one participant per household and all had to meet the same study qualifications--self-described African-American and 65 years old and over. In addition, Dr.

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[4] Recruiting African-American participants through churches is quite convenient, as, with few exceptions, religious institutions tend to be among the last vestiges of total segregation in the United States. To those who claim my study is biased in favor of church members, I would point Snow's estimate that approximately 90% of blacks attend church (Snow, 1993). While this figure may overestimate younger blacks' church attendance, it is probably fairly accurate for older blacks. In addition, I found approximately 25% of my sample at the public health clinic.

C. Probart advised me to select people with diagnosed hypertension for at least two years since I could not ascertain a "true" level of adherence until the individual was over the initial shock, rejection, or other emotional reaction to the diagnosis (personal communication, 1990).

Although I was able to reach my target study sample size, recruiting males proved problematic. The lower life expectancy of men, their semi-employed status, and a lack of willingness to "indulge themselves" in self-directed conversation (perhaps especially to a young woman asking personal questions) contributed to the difficulty securing male participants. Consequently, the study consist of sixteen male and twenty-five female participants. Undoubtedly, paying participants for their time and information attracted many willing participants. For people who have labored arduously their entire lives, earning five dollars an hour to chat about their lives, health, diets, etc., seemed like a "good deal." One man exclaimed, "That's the easiest and nicest money I've ever made!"

Study Sample

A rapid glance at the demographics of my sample reveals some important information. Sixty percent (n=25) are women, 40% (n=16) are men. The mean age is 72, with a standard deviation of 6.3. The youngest participant is 65 and the oldest 89. To assess if age differences account for differing factors in adherence, I have grouped people into one of two categories; the younger group (age 65-74) (60% or 25 individuals) and the older group (age 75 and older) (40% or 16 individuals). Such an age division approximates national statistical reporting.

For ease of categorization, I have collapsed years of education into three groupings; Figure 1-3 displays the results.

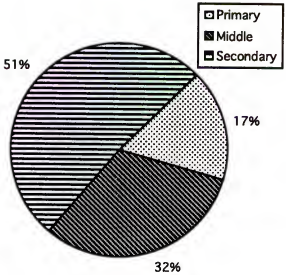

Figure 1-3: Educational attainment level of study sample

This level of education exceeded my expectations since most research suggests that older rural-dwelling African-Americans have very little formal education. However, as Dr. L.S. Lieberman notes (1994, personal communication) if many individuals assisted with farming as children, educational level may be slightly skewed toward higher categories because the children's education was disrupted by seasonal labor requirements, but they were nonetheless advanced to the next grade level.

Less surprising was the sample's low income. None of the participants could be considered wealthy and, as Figure 1-4 illustrates, many are poor. Since, according to anthropological convention, participants were asked to which income category they belong, I am unable to specify the earnings of the five individuals with incomes over $10,000 annually (Bernard, 1989). However, it is unlikely that these study participants' incomes are dramatically different from others' given the similarity of their material surroundings and life circumstances. As Chapter 6 indicates, all of the study participants are under or very close to poverty level.

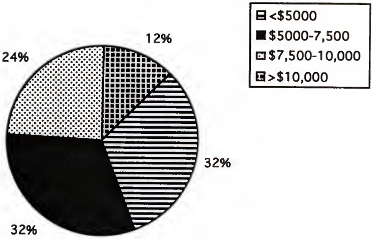

Figure 1-4: Study participants' income annual level

As Figure 1-5 reveals and Chapter 5 on social support explains, household composition varies extensively among study participants.

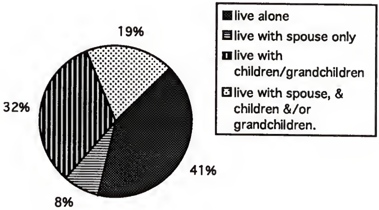

Figure 1-5: Study participants' household composition

Study participants have received treatment for their hypertension from two to over forty years; Table 1-1 shows the distribution.

Table 1-1: Study participants' treatment duration

2-5 years	6-10 years	11-20 years	>20 years
22% (9)	32% (13)	19% (8)	27% (11)

These sociodemographic variables were correlated with other potential influences on adherence to treatment recommendations. My instruments consisted of both close-ended questionnaires and open-ended surveys and ethnographic interviews. I found the broad categories of the Health Belief Model particularly useful to evaluate the impact of the following variables: health beliefs and knowledge, social support, communication with health care providers, sources of health information, household composition and sociodemographic factors. These variables form the basis for each of the chapters that follow.

Interview Schedule

I interviewed most participants in four to five meetings at their homes or in a spare room of the Public Health Clinic. The first meeting I would explain the purpose and structure of the interviews, read and have them sign the informed consent document, and take down an extensive health history and dietary intake interview.[5] We would usually spend a half hour chatting about their life history, their church, and the community. During the second meeting, we would complete the twenty-four hour dietary recall, the information source questionnaire, and the ethnomedical survey. This latter instrument would take a great amount of time because of its detailed and open-ended questions. In addition, we usually spent a while discussing diet and consumption patterns informally. During the third meeting, participants would complete the multidimensional health locus of control instrument as well as the Public Health Service's hypertension knowledge questionnaire.

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[5] I filled out all of the interview forms for the participants. This enabled them to give me their most complete and unrestricted answers, as well as avoiding the potential embarrasment of low literacy or physical limitations like poor eye sight.

After the conclusion of the formal instruments, I would discuss their personal opinions of high blood pressure, frequently contributing additional information to my notes. Interviews lasted approximately ten to fifteen hours per participant.

We completed two social support surveys, the patient/physician communication instrument, and the household structure and responsibilities questionnaires during the fourth meeting. Our informal discussions would usually focus on the problems and joys of family. By this time, I would know intimate details about participants' family life and daily routine. Finally, during the fifth session we would "wrap up" any unfinished instruments, give the promised payment and I would answer any of the participants' questions. I have also made many informal repeat visits to participants' homes for updates on their health status and to enjoy their company.

Research Methods

The Health Belief Model and Instruments

I have created a model (see Figure 1-6), based on the Health Belief Model (HBM), to assess potential determinants of adherence. First proposed in the 1950s by social psychologists seeking to discover why people declined to participate in disease detection and prevention screenings (Rosenstock, 1974), various subsequent researchers have expanded the model to account for acceptance or rejection of diverse health recommendations (Rosenstock, 1974; Becker et al., 1977; Becker and Maiman, 1983). Since its inception, researchers have used the HBM under diverse socio-demographic circumstances numerous times with overall high reliability (Janz and Becker, 1984).

According to the HBM, various demographic, sociopsychological, modifying factors and barriers affect whether the individual perceives a disease to be serious enough to warrant action. The model's two primary tenets are as follows; to pursue a particular health action the person must first recognize the disease to be threatening, and the treatment to be positively effective. Although not a direct duplicate of the HBM, my study makes use of the general HBM categories, as the list below illustrates.

Eleven instruments were used, ranging from open-ended ethnographic questionnaires to Likert-like surveys. All of these instruments are discussed in the relevant chapters. The Health Habits and History Questionnaire (HHHQ) (Block, 1981) served as a general survey questionnaire to collect dietary and demographic data as well as a health history. Those instruments that are not standard and accessible in the literature are located in the appendix. These include the revised ethnomedical survey (Kleinman et al. 1978; Snow 1983; Randall-David, 1985), the 24-hour dietary recall, and the household and financial survey (see Appendices A and B). In addition, a summary of basic information (sex, age, weight readings, duration of treatment for hypertension and adherence level) about participants is included in Appendix C.

Variables Tested and Instruments Used

I. INDEPENDENT VARIABLES
  A. Demographic and sociopsychological variables (enabling factors)
    1. gender (Block, 1981)
    2. age (Block, 1981)
    3. knowledge of the disease (H.H.S., 1986)
  B. Cues to action (motivating factors)
    1. the influence of mass media/information source (Randall-David, 1985)

        2. physician/patient communication (Hecht, 1978 and Buller and Buller, 1987).
        3. social support (Norbeck et al., 1981; Tilden et al., 1990).
- II. INTERMEDIATE VARIABLES
    - A. Perceived susceptibility to and seriousness of hypertension and perceived efficacy of treatment (predisposing factors)
        1. health beliefs (modified Kleinman et al., 1978)
        2. duration of treatment (Block, 1981).
        3. health locus of control (Wallston et al., 1976)
    - B. Perceived benefits of and barriers to adherence[6]
        1. access to resources (financial survey)
        2. time/family responsibilities (household survey)
- III. DEPENDENT VARIABLE: ADHERENCE[7]
    - A. Develop ordinal scale or rank based on:
        1. self-reported food consumption (Block, 1981 and 24 hour food recall)
        2. informant's weight records in their physician's office
        3. compared to physicians' recommendations for antihypertensive diet therapy

Figure 1-6 shows the model of dietary adherence I created to accompany my investigation. The model uses the HBM-based ideas that perceived susceptibility to a disease, accompanied by an individual's belief in the disease's severity and a cost/benefit analysis of the treatment influences the likelihood of treatment adherence. The model differs from the HBM, as it recognizes the influence of external factors such as the cost and availability of health food, as well as the individual's role in dietary decision-making, like the person's psychological functioning. While this model is quite general and broad, it allows for individual variation and does not presume to know the relative extents to which each variable affects likelihood of adherence.

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[6] These last two variables were measured by a standard questionnaire.

[7] The details of how I evaluated adherence are explained in Chapter 2 on adherence.

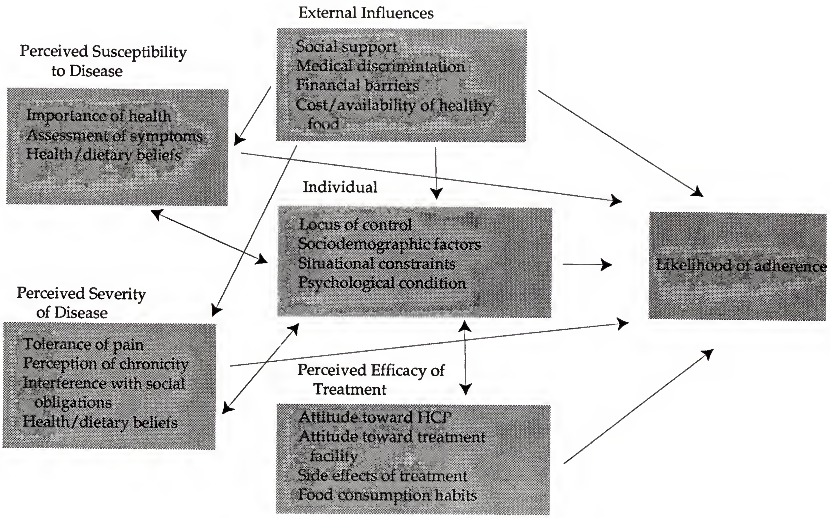

Figure 1-6: A Model of Dietary Adherence

Summary

Over the course of developing and executing my research plan and writing this dissertation, I have usually explained my topic as, "asking people why they do or do not or can or cannot listen to their doctor when he or she tells them to cut back on their salt, fat, and weight." In the course of my explanation, many people have asked me why I simply do not ask my participants that same question. That certainly would have been easier, less expensive, and less time consuming. The problem with this apparently straight-forward approach is that it is unlikely to allow me to obtain much useful information. I think that most people would have been highly reductionist, saying whatever (even if done with the greatest sincerity) came to their minds quickly. I do not believe that the respondents would consciously acknowledge the influence of their doctor, their family, their incomes, etc., on their diets. Even using what I believe is a rather comprehensive consideration of determinants of adherence, I fully recognize that I have not accounted for all the disparate elements that possibly shape dietary decision making and health behavior. Dressler describes the same concern in his stress research.

> The multidimensional sense of identity proposed to be the intervening process in this research is not residing in an individual's memory banks, waiting to be printed out if we can just discover the right command. Rather, this sense of self is more like an incomplete, fragmented, and usually simply understood theory of one's life. When confronted with a particular set of questions by the social scientist, this theory is articulated, more-or-less completely. (1991, p. 291)

CHAPTER 2
ADHERENCE

Most researchers approach compliance or adherence studies as an exercise in exploring and explaining the irrational or, at best, a complex decision-making process. The notion that, after undergoing pain as well as the trouble and expense of seeking medical advice, an individual does not follow a physician's recommendation seems to contradict the anticipated sequence of sickness, professional assistance with diagnosis and recommendations, and then careful adherence, recuperation, and recovery (Parsons, 1975). Researchers have found the decision not to follow treatment recommendations so enigmatic that adherence studies have become a major subfield of behaviorist studies in medicine. In this chapter, I define the main issues of adherence studies, explain models of determinants of adherence, and discuss the results of my study.

The State of Adherence Research

Research surrounding the subject of adherence is voluminous and is increasing at an extraordinary rate. From 1965 to 1990, over 8,000 English-language papers have been published on adherence, in contrast to the twenty-two articles prior to 1960 (Donovan and Blake, 1992). From 1965 to 1978, 850 articles on adherence appeared in print, and from 1979-1985 that number increased to over 3,200. In 1984 and 1985 alone, 1100 adherence-oriented papers were published, an amount consistent for practically the past decade (Trostle, 1988).

The increasing interest in adherence results from several intellectual and societal trends in health care. First, the most common current health challenges in Western nations, chronic diseases, generally require more than just an injection or an operation; to follow medical recommendations involves extensive patient participation and adoption of new lifestyles. To understand the obstacles facing patients and potentially compromising health status, scholars have begun to focus on adherence determinants.

Secondly, according to Richardson (1984), the 1960s ushered in a new awareness of the rights of women, patients, and people with disabilities, thereby encouraging self-help and decreasing professional dominance and paternalism. If patients are the primary players in their own health recovery, why not focus on patients and conditions surrounding their behavioral modification?

Another reason for the upsurge in interest in adherence is the realization that patients' health status is not improving proportional to ever-increasing health expenditures. Health policy pragmatists questioned the logic of spending nearly fourteen percent of GDP on health care, or $2868 per capita, if medical recommendations go unheeded and health status does not improve (Cohen, 1994). While many analysts agree that the United States' health care system is only minimally cost effective and equitable, (particularly compared with other nations)[1] efforts to contain spending must include improving adherence. Nonadherence can be quite expensive if one considers the cost of missed or duplicate appointments, repeated procedures and disease relapses.

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[1] Compared to Canada, households in the United States spend significantly more on health care, particularly among the elderly. For example, while U.S. household health care expenditures are $14,992 and $10,708 for those 65-74 and over 75, respectively, Canadians spend $12,776 and $9,354 (Cohen, 1994).

Aside from improved patient health, some researchers hold that the health care, pharmaceutical and other health-related industries stand to benefit from enhanced adherence (Trostle, 1988). If patients take their medicine and return for follow-up appointments as prescribed, for example, pharmaceutical companies and physician's offices will gain greater profits. These powerful industries already make a handsome profit; for example, due to price increases and expanding markets, the pharmaceutical industry saw a $56.5 billion increase from 1960 to 1991(Cohen, 1994). Improved adherence would also bring in a great deal of additional income to private medical offices since 20-50% of patients fail to return for appointments (Gerber and Nehemkis, 1986).

Although there are many reasons for the increased emphasis on adherence research, including more accurate assessment of health behavior, empowerment, increased financial efficiency and profit-making, the main goal of these studies is to improve health status. While adherence research comprises a significant portion of current investigations into health behavior, some fundamental issues are far from being resolved (Harris and Linn, 1985; Gerber and Nehemkis, 1986; Connell et al., 1988). Key among these issues are definition and measurement.

Definitions of Adherence

One of the simplest and often most contentious issues in adherence research is whether to call this particular health behavior "adherence" or "compliance." While many social scientists believe that health care should be a contractual and mutual relationship best conceptualized by the term "adherence," many health professionals prefer to use the term "compliance," to give the physician or other health care professional (HCP) the key role in health maintenance and recovery, emphasizing the inequality of the patient/physician dyad and the unidirectional flow of information from HCP to patient (Gerber and Nehemkis, 1986).

Proponents of "adherence" tend to give more control to the patient, believing "compliance" invalidly justifies physician authority by claiming such authority rests on empirical truths (Trostle, 1988). Accordingly, a patient's decision to accept or reject medical recommendations represents a complex balancing of quality of life issues, conflicting claims of information, and social, financial, and behavioral readjustment. Particularly in the case of chronic disease, the decision to follow a treatment recommendation involves a deliberative and rational decision-making process. In fact, "adherence" advocates maintain that nonadherence may be a deliberate strategy the sick pursue to control their own lives (Gerber and Nehemkis, 1986). In addition, nonadherence was not completely irrational in past times when leeching, shocking, trepanning, purging, cupping and lobotomizing were routine procedures. Nor is contemporary nonadherence irrational, as Dr. L.S. Lieberman points out, given many medications' low efficacy and uncomfortable side effects (personal communication, 1994).

On the other side, there are those who define noncompliance as "patient reluctance, reactance, and recidivism characterized by refusal to comply, or lack of sustained effort." (Schlenk and Hart, 1984, p. 566) Seeking to explain why a reported 50-80% of recommendations are partially or incorrectly followed, or completely unheeded, compliance researchers often focus on one main determinant such as treatment complexity to explain why patients refuse to accept advice they have sought. Since medical research is "scientific," the physician is best equipped to lead an individual to better health. Noncompliance is seen as a wasteful, inefficient, and harmful neglect of advice made in the patient's best interest. Furthermore, it interferes with a practitioner's attempts to restore health to an individual.

While the adherence/compliance debate illuminates some important differences in perspective, I concur with Haynes, Taylor, and Sackett (1979) who argue the two terms are interchangeable and do not warrant such extensive debate. Their somewhat neutral stance defines adherence as "the extent to which a person's behavior (in terms of taking medicine, following diets, or executing lifestyle changes) coincides with medical or health advice."(p.19) The term "adherence" will be used throughout this dissertation, to signify agreement with the notion of the health professional/patient "therapeutic alliance."(Barofsky, 1978, p. 44)

Measurement of Adherence

The measurement of adherence is an extremely complex and much debated topic. Examples of measurement problems include how to determine if someone is following recommendations (the assessment of adherence); the acceptable extent of adherence (just how adherent *is* adherent?); and whether misunderstanding a recommendation is nonadherence (is adherence characterized solely by intention?). A final problem concerns the lack of reliable and valid measurements for dietary adherence.

Assessment of Adherence

There are many means used to determine whether an individual is following the doctor's orders. Direct detection, including chemical measures of body fluids and clinical outcomes, has the advantage of objectivity and can be a discreet method of checking up on the patient's intake. However, such tests have the disadvantage of possible patient manipulation (a regularly nonadherent patient can take his or her medication the morning before the examination, for example) and may undermine a good working relationship if the patient feels the physicians does not trust him or her to take the medication or tell the truth. Using clinical outcomes as an adherence measure is based on the assumption that all patients have a similar reaction to interventions, when in fact some illnesses are self-limited and some interventions are not successful even if carefully followed. A final limitation of direct measures of adherence is that they are generally inappropriate for dietary assessment.

Indirect assessments, including pill and appointment counts or self-reported intakes, also have disadvantages and advantages. Although health professionals can use any number of detection devices such as electronic pill counters, such equipment may undermine the patient/practitioner relationship and further impede adherence (Meichenbaum and Turk, 1987). Furthermore, while labeling pill counts, "the gold standard," Klein nonetheless believes them to be impractical in general office practices (1988, p. II-61). Patients may forget to bring in their medication or manipulate the number of pills in the bottle to "please" the practitioner.

In addition to these drawbacks of indirect assessments, there are problems associated with relying on people's self-reports. Hippocrates warned long ago, "The physician should keep aware of the fact that patients often lie when they state that they have taken certain medications" (as quoted in Sackett and Snow, 1979, p. 3). The patient's desire to please or to avoid reprimand may compel him or her to provide incorrect information or to withhold the truth (Bernard, 1988).

Despite these very real drawbacks, self-reported dietary intakes, food diaries, and qualitative interviews have been known to provide invaluable insights especially when repeated for reliability. For example, Meichenbaum and Turk's (1987) study indicates that individuals are quite accurate at predicting their own adherence when measured against more objective standards. Morisky found that 75% who claimed to be "high compliers" had good hypertension control, compared with 47% rating themselves as low compliers (1986). Klein's brief analysis of self-reports cites four additional studies confirming food diaries' reliability and validity (1988). Similarly, Harris and Linn (1985) found that their sample of African-American diabetics were not reluctant to disclose information indicating nonadherence. I also found this to be the case in my study; very few informants seemed to conceal salt and fat intake, even when fully aware that they were "breaking the rules."

But even if researchers rely on self-reports, other measurement problems remain. Is a person adherent if he or she takes a few too many pills? Cuts down on fat but not on salt? Increases exercise but does not decrease caloric intake? While those who take 80% of their medication are frequently considered to be good adherers, dietary evaluations are less quantifiable (Sackett and Snow, 1979). In fact, there are no existing and consistant standards of assessing dietary adherence.

Finally, even aside from measurement issues there is the question of the therapeutic result. Does adherence necessarily enhance health and, if so, how much does adherence help? Carmody et al. (1987) speculate that one-third of their study's hypertensives would have maintained good blood pressure control without sticking to a rigid medication and dietary regimen. Furthermore, one-half of those adhering to "heart healthy" regimens failed to achieve good blood pressure control. And, as Kaplan's textbook on hypertension notes, "We are left with no evidence of overall effects of lifestyle modifications on morbidity or mortality, the type of information that is clearly needed to prove their value." (1994, p. 172)

Extent and Determinants of Nonadherence

Perhaps if nonadherence were not so widespread and problematic, many researchers might abandon their search for understanding of this issue and its accompanying complexities. But, since general estimates of nonadherence range between 20 and 80% and average about 50%, (Meichenbaum and Turk, 1987) investigators must and do acknowledge the critical role of understanding factors related to adherence.

Adherence rates vary according to a numerous determinants, incorporated into multifactoral models. Such models generally include preceding, enabling, and motivating factors (Heiby et al., 1989). Becker and Maiman (1975) have created the most all-encompassing and well-known health belief and behavior model (known as the Health Belief Model or HBM) and few theorists have contested its legitimacy. (Though the HBM would improve by considering the powerful influences of disease and regimen complexity). Harris and Linn (1985) concur with Becker and Maiman's model, emphasizing that adherence results from two psychological states of readiness created by perceived personal vulnerability and a treatment cost/benefit analysis. That is, the patient must believe he or she is susceptible to the disease and its effects on health and that the treatment will be more beneficial than inconvenient or harmful (Becker and Maiman, 1975). For example, the very low rates of dietary adherence to a chronic disease regimen among people under forty years of age reported by Radimer et al. (1992) probably reflect a belief of invulnerability.

Similar to these categories but arranged differently are Meichenbaum and Turk's five variables of adherence; characteristics of the patient, of the disease and of the treatment regimen, relationship between the health care provider and patient, and the accessibility of the clinical setting (1987). Finally, DiMatteo and DiNicola's three categories provide a good organizational framework for studying determinants of adherence. These include intrapsychic factors such as disease beliefs and attitudes; environmental factors such as demands on the individual's resources, time, etc.; and the patient-practitioner relationship (1982).

Penchansky and Thomas (cited in James et al.,1984) list the following four dimensions as most germane to adherence: accessibility to services; accommodation (e.g. ease of getting appointment); affordability; and acceptability (e.g. how well the patient and the medical staff get along). Janz and Becker's 1984 meta-analysis reinforces this view but also emphasizes the impact of health beliefs. In twenty-nine of what they consider the best articles on this topic, 91% mentioned barriers to treatment, 81% discussed benefit of treatment, 77% listed perceived susceptibility, and 59% included perceived severity of illness as main factors of adherence.

Sackett and Snow's meta-analysis further emphasizes the primacy of health beliefs, but adds a few additional determinants. Of the more than 193 factors tested over ten times, only race, complexity of treatment, duration of treatment, and belief in the treatment's efficacy had a significant effect on adherence (1979). Such predisposing factors, enabling factors, and motivation or barriers to adherence are discussed in their own chapters. In the following paragraphs, I discuss characteristics of the disease and treatment regimen as well as certain sociodemographic determinants.

Characteristics of the Disease

Components of the disease, particularly its chronicity, severity and the appearance of symptoms, may influence a patient's level of adherence. Richardson (1984) reports that disease chronicity may diminish adherence by as much as half because such diseases tend to be complex and have few recognizable symptoms or immediate threats of disability. People who believe, for example that their high blood pressure is a disease threat rather than an actual disease may not acknowledge the need for treatment. Snow quotes an older African-American woman as remarking with astonishment, "I didn't know it (high blood pressure) was a disease!" (1993, p. 96). Furthermore, since high blood pressure is a complex disease, complications, behavioral modifications, and other treatments need to be discussed with the patient at length. The control of chronic diseases requires good patient-practitioner communications, sufficient information, a reassuring social network, and accessible, reliable long-term medical care.

Unlike chronicity, severity does not seem to affect adherence unless the disease is so debilitating that it requires hospitalization or other monitored care necessitating and enforcing adherence (Haynes, Taylor, and Sackett, 1979). On the other hand, some theorists speculate that the greater the perception of disease severity, the more hopeless an individual may become. Nonadherence may be a response to such hopelessness; according to such researchers nonadherence is a strategy whereby the sick person "takes control" or directs the course of his or her illness and treatment (Barnhoorn and Adriaanse, 1992).

Adherence may also be predicted by the non-appearance or appearance of symptoms. High blood pressure, nicknamed "the silent killer," is frequently left untreated because many hypertensives believe that absence of symptoms means absence of health risks (H.H.S., 1986). However, this factor may not have an effect on my study sample, most of whom were able to site at least four easily recognizable high blood pressure symptoms (i.e. feeling faint, dizzy, or "swimmy in the head") and many of whom recognized that high blood pressure (HBP) may be asymptomatic. Barnhoorn and Adriaanse report that a person may take immediate action and follow treatment recommendations carefully if he or she experiences a large number of symptoms (1992). On the other hand, one study reports that many elderly people tend to overlook less dramatic symptoms with the conclusion that "I'm doing pretty good for my age" (Snow, 1993). In this study my emphasis is on dietary adherence, so I have not included disease characteristics as a variable. However, in adherence studies as a whole, particular diseases and symptoms appear to be relevant to adherence.

Characteristics of the Treatment Regimen

Features of the regimen such as duration, intrusiveness, and complexity have a variety of effects on adherence levels. Several literature reviews have noted that the longer the duration of treatment, the less likely an individual is to follow a physician's recommendations (Meichenbaum and Turk, 1987). According to Haynes, Taylor, and Sackett (1979) people are more reluctant to change their lifestyle through dietary modification and exercise than to take medication. Patients usually adhere to "one shot" treatments, such as injections, or those completely administered by a medical authority such as chemotherapy. Meichenbaum and Turk note that 92% of chemotherapy[2] patients follow medical recommendations, while only 20-40% of those instructed to lose weight accomplished their goals and a mere 7% of those diabetics instructed to exercise did so (1987).

When individuals perceive a medical recommendation will complicate their life, they are likely to dismiss the advice. Thus, it is not surprising that many patients fail to keep appointments and take medications erratically (Becker and Maiman, 1975; Sackett and Snow, 1979; DiMatteo and DiNicola, 1982; Richardson, 1984; Gerber and Nehemkis, 1986; Chubon, 1989). Dunbar (1980) and many others observed a "one-third always, one-third sometimes, and one-third never" adherence rule for people's level of taking medication. But Sackett and Snow's study (1979) revealed that half of those who are on medications fail to properly follow recommendations and nearly 60% of those on antihypertensive medication make mistakes with dosage. Similarly, approximately 50% of all individuals regardless of age, sex, or ethnicity fail to keep their appointments for nonemergency visits (DiMatteo and DiNicola, 1982; Gerber and Nehemkis, 1986). Those patients whose appointments are made for them fail to show up more often than those who make their own appointments (DiMatteo and DiNicola, 1982).

According to Connell et al., the greater a regimen's complexity the greater the likelihood of nonadherence is "perhaps the statement that can be made with the most confidence in the area of adherence." (1988, p. 123) While other researchers may be less emphatic, multiple recommendations and information overload (Sackett and Snow, 1979) can lead to confusion and nonadherence, particularly if behavior modifications conflict with social roles (Richardson, 1984; Chubon, 1989). A regimen's intrusion in and disruption of family or social life may be a major determining factor of its acceptance. Modifying food consumption can be extremely disruptive to familial meal patterns and consequently met with resistance.

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[2] In the case of chemotherapy, the perception of severity may also influence a patient's decision to follow treatment recommendations.

The treatment of chronic diseases, such as hypertension, has the unfortunate distinction of being intrusive, long lasting (if not permanent), and complex. Meichenbaum and Turk cite a hypertension study that illustrates such extensive medical treatments accompanying most chronic diseases tend to increase patient resistance to medical recommendations. One-third of those diagnosed with high blood pressure pursued no treatment at all. Of those who did pursue treatment, 50% failed to follow advice for physician referrals; 50% dropped out of care within a year; and one-third of those remaining under care failed to correctly follow medication guidelines. Thus, the study concluded, 70% of these hypertensives failed to follow proper high blood pressure control measures (Meichenbaum and Turk, 1987). If dietary modification were considered, the rate of nonadherence would undoubtedly be higher.

As previously mentioned, dietary modification and maintenance of dietary control are particularly problematic. In Chubon's study of African-American hypertensives, eight of fourteen participants took medication properly but nearly all disclosed that while their doctor "ordered" them to reduce fat and salt consumption, none had done so (1989). Richardson similarly speculates that many members of her black study sample view medication as "magic bullets" to be taken faithfully, but are less willing to alter their diets because of the intrusiveness (1984). DiMatteo and DiNicola (1982) report that 95% of those instructed to lose weight fail to achieve their weight loss goal permanently. Kushner's study documents similar "patient recidivism"; 70% of patients dropped out of a lipid-lowering diet program only three months after its inception (1993). Finally, Meichenbaum and Turk's (1987) study of weight loss and substance abuse found that 60-80% of patients had relapsed into their former consumption style within three months of initial treatment.

Study Definition and Measurement of Adherence

In this study, I define dietary adherence as the degree to which a participant follows his or her physicians' recommendations. Inherent in this approach are two biases. First, I assume that only "western" or biomedical health recommendations constitute "true" health advice. I have reluctantly accepted this bias because, according to this and the diabetes study in which I was involved,[3] most of this sample considers physician consultations and recommendations the standard treatment course as well as the main source of important health information. Second, since most of the literature indicates the possible benefits of "lifestyle modification," I assumed that the physician would give patients advice about dietary modification and possibly weight loss recommendations (Kaplan, 1994) . My consultations with the physicians[4] indicates that they unanimously gave such advice to their hypertensive patients. In fact, many of the physicians use the same handouts describing such recommendations. Two of the most popular handouts were provided by the American Heart Association (Grundy, 1991) and the American Dietetics Association (1992).

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[3] Our study (Dr. L. Lieberman, P.I., Dr. C. Probart, co-P.I., and N. Schoenberg, research assistant) of African-American women with diabetes was conducted in two rural Florida towns. The study revealed the predominant use of biomedical remedies and services.

[4] I interviewed every participant's physician (five total) to obtain information about dietary recommendations for hypertension and assessment of their patient's adherence to these recommendations. In addition, I collected weight records for all study members usually over the past three years, depending on his or her diagnosis date and the number of years each study participant has maintained a relationship with his or her current physician.

In order to arrive at a valid measure of adherence in my research, I decided to use several approaches and tools. First, I completed a standardized dietary intake form for each individual, listing all the foods they eat and drink, the serving size, and frequency of consumption (Block, 1981). This inventory is sufficiently comprehensive to ensure representation of diverse food choices. Participants are asked to estimate how frequently they consume over 200 foods and their approximate serving sizes. The program then estimates the sodium, fat, and nutrient content of these foods, breaking them down to a daily intake estimate. The Block program estimates fat intake in three ways; first, from a computer-generated food content analysis; second, by directly asking the participant to estimate how many servings of butter, margarine, etc. she or he consumes daily, wekkly, etc.; finally, each participant is asked how much and what type of fat is used in food preparation and flavoring.

While the Block instrument has been criticized for its scant portion sizes, it is a culturally appropriate dietary analysis tool that provides analyses of a wide variety of nutrients. Critics of the Block and other dietary analysis programs also contend that fat and salt intakes are generally underestimated; however, this is a problem with all instruments that rely on self-reported data. Thus, given the human limitation of accurate reporting, the Block dietary analysis program performs relatively accurate nutritional analyses.

To circumvent the problem of inaccurate reporting, another instrument was employed to evaluate nutritional intake. In the second interview, I asked study participants to recall what they ate over the past twenty-four hours. If the results of these two measures seem to be fairly consistent, I judged them to be reliable and performed a statistical analysis of the complete dietary intake. By "consistent" I mean the two instruments did not show any wide differences in reported consumption. I compared food frequencies by estimating salt and fat contents of foods reported in the 24-hour food recall (using the American Heart Association handout as a guide) and compared the results with the computer-generated outcome of the Block instrument (1981). Since both instruments estimate consumption on a daily basis, I was able detect any major discrepancies between them.

After an extensive interview session with each participants' physician, I compared these data with the physicians' dietary modification advice, which unanimously reflected standard recommended daily allowances for hypertensive patients. These standard recommendations are as follows for hypertension control : sodium use should be limited to between 500-2000 mg daily and fat intake should not exceed 30% of daily caloric intake; (Grundy, 1991; The American Dietetics Association, 1992).

In addition to soliciting the general advice doctors give their hypertensive patients, I asked each participants' physician about weight loss recommendations and the offices provided me with weight records, if applicable. Finally, I asked the physician to estimate an overall rating of the patient's dietary adherence level (high, medium, or low).

To determine a numeric adherence score for each participant and ultimately an ordinal ranking of adherence, each participant received either a 1 (less adherent) or 2 (more adherent) for following fat, salt, and weight reduction (if directed) guidelines. However, since studies reveal physicians to be poor predictors of adherence levels, their opinions were only weighted half as heavily as fat, salt, and weight factors (Morisky, 1986; Clark, 1991). A high adherer generally scored within the recommended ranges for salt, fat, and weight (numerically a 7). A medium level individual tended to exceed the ranges for one of the dietary recommendations or failed to meet the weight goals (numerically a 6), while a low adherer either met only one or none of the recommendations (numerically a 5 or lower).

Study Results

Figure 2-1 displays study participants' adherence levels This distribution partially confirms my first hypothesis that this sample cannot be considered unusually non-adherent. In fact, medium to high adherence characterizes 63% (n=26) of my study sample. The findings contradict years of literature positing that African-Americans have poor adherence to treatment recommendations, and is more consistent with NHANES III data showing relatively good hypertension control among blacks (as cited in Kaplan, 1994, p. 13). It should be mentioned, however, that since most dietary studies do not use the same criteria for adherence and becasue of my small sample size, my study findings are not directly comparable to others' findings.

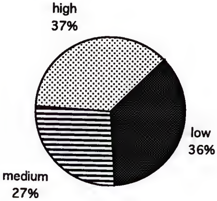

Figure 2-1: Study participants' adherence levels

Also, as predicted, my study data show an inverse relation between adherence and duration of treatment. As Table 2-1 illustrates, there is increasing non-adherence for those who have obtained anti-hypertensive treatment longer than ten years.

Table 2-1: Study participants' treatment duration by adherence score

Treatment duration	low adherence	medium adherence	high adherence
2-5 years	22%(2)	---	78%(7)
6-10 years	24%(3)	46%(6)	31%(4)
11-20 years	38%(3)	38%(3)	25%(2)
>20 years	64%(7)	18%(2)	18%(2)

p=.03, n=41, gamma=.499

Sixty-four percent of those in the longest duration group (over twenty years) have low adherence levels, compared with 22% of those in the shortest duration category (two to five years). Conversely, only 18% of the longest duration group have high adherence levels compared to 78% of those in the shortest duration group.

Age and sex may confound this relationship between treatment duration and adherence. Younger members of the sample (65-74) tend to have received HBP treatment for a shorter amount of time. For instance, approximately three-quarters of those who have under a physician's care for hypertension for only two- to five years are in the younger group while two-thirds of those on treatment for more than twenty years belong to the older group (see Table 2-4). In addition, women tend to be disproportionately represented in the shorter duration groups and men in the longer duration groups. Seventy-eight percent of those in the two to five year duration of treatment group are women and 63% of those in the eleven to twenty year group and 55% in the over twenty years of treatment group are men.

Sociodemographic Determinants of Adherence[5]

Few researchers have correlated such demographic variables as gender, age, and education with adherence, despite the usefulness of such correlations. Other independent variables frequently categorized as sociodemographic, such as income and household composition, are discussed in later chapters.

Women are said to be more "health oriented" than men. Studies indicate that females are more likely to report symptoms, to seek care, and to fill prescriptions than men (Cockerham, 1986). Aside from the work of Radimer et al. (1992) that found women slightly more likely than men to follow dietary recommendations, however, few studies designate women more likely to follow their physician's recommendations.

Table 2-2 illustrates that in my study the effects of gender on adherence are complex, but not statistically significant.

Table 2-2: Gender by adherence score

Gender	low adherence	medium adherence	high adherence
female	32%(8)	32%(8)	36%(9)
male	44%(7)	19%(3)	38%(6)

p=.60, n=41, chi square=1.01

Gender differences are visible in income levels, possibly leading to the conclusion that income may be more of a determinant to adherence level than gender itself. As Chapter 6 on economic access issues will explain, men in the study are more likely to be represented in the higher income categories and are disproportionately represented in the low adherence group. The effects of household composition and income on adherence will be more fully explained in Chapters 5 and 6, respectively.

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[5] Because of the relatively small number of individuals in my study, most correlations are statistically insignificant, precluding analysis by controlling for demographic variables. Instead, I can only speculate on possible confounds.

Education is another gender-related factor. In fact, if education is positively related to adherence level, then we would expect men to have a higher level of adherence. While men and women are proportionately represented among those who fall in the secondary (highest) educational group, women are disproportionately present in the lowest educational attainment group.

Education-As the chapter on health beliefs will demonstrate, understanding of and concurrence with the biomedical model is a necessary precondition for following physicians' treatment recommendation. However, is a relatively high educational level a necessary precondition for this knowledge and understanding? Since many older blacks were not afforded the opportunity for extensive education, many researchers have assumed that there is a concomitant low adherence level.

While my study sample has a relatively high level of education, there were significant enough differences in those educational levels to conclude that education affects adherence. Every person who completed fewer than six grades of education has a low adherence level, while those with the most education are disproportionately represented in the high adherence group. as Table 2-3 indicates, those who completed six to nine grades (the middle group) are almost equally represented among differing levels of adherence.

Table 2-3: Educational level by adherence score

Educational level	low adherence	medium adherence	high adherence
primary	80% (8)	10%(1)	10%(1)
middle	31% (3)	38% (4)	31% (3)
secondary	19% (4)	29% (6)	52% (11)

p=.01, n=41, gamma=-.623

Income and age may intervene to confound education's impact on adherence. Those with low educational achievements also tend to be poorer. Forty-three percent of those with the least education also have the lowest incomes (under $5000 annually), where as only 19% of those with the highest educational achievements are in the poorest group. Conversely, 80% and 60%, respectively, of those in the higher and highest income groups ($7500-$10,000 and over $10,000 annually) have the most education. In addition, the "young elderly" tend to have more education. For instance, 80% of those with the most education are young while 71% of those with the least education are old. There are few apparent correlations between household composition or gender and education except that those with the least education tend to live alone and are female. Thus, while education significantly affects adherence level, it is also important to consider other demographic characteristics of those with differing educational levels.

Age-There are conflicting findings in the literature over the effect of age on adherence levels. Some studies indicate less adherence in the extremes of age, i.e.. the very young and the very old (Stone, 1979; Eckenfels et al., 1977). Becker and Maiman (1975) cite Blackwell's study of the very elderly in which low levels of adherence are associated with self neglect and forgetfulness. On the other hand, many researchers have found elderly individuals to be more willing than younger people to follow their physicians' recommendations (Richardson, 1984; Connell et al., 1988; Klein, 1988; Radimer et al., 1992; Shea et al., 1992; Sherbourne et al., 1992).

Contrary to my initial predictions, age seems to have no effect on adherence level in my study. As Table 2-4 indicates and and analysis of variance proves, the younger (65-74) group is statistically no more adherent than the older group (40% are high level adherers compared with 31% for the older group) and approximately 37% of both groups has a low adherence level.

Table 2-4: Age by adherence score

Age	low adherence	medium adherence	high adherence
younger (65-74)	36% (9)	24% (6)	40% (10)
older (over 74)	38% (6)	31% (5)	31% (6)

p=.717, n=41

Thus, age makes no difference to adherence level despite gender, education, and income skewedness between the younger and older groups. The younger group has a disproportionate number of males,[6] the more educated (81% of those with the most education are younger), and is less likely to be very poor (38% of the older group compared to 28% of the younger group earns less than $5000 annually).

Understanding Dietary Adherence: The Challenge of Modification

Even if we develop a profile of who is likely to follow the physician's recommendations, the researcher remains confronted by the question of why dietary modification occurs. As most research reveals and dieters attest to, permanent dietary change is difficult, if not practically impossible, to achieve. First, the selection, preparation, and consumption of food is culturally defined and endowed with ritual, tradition, and habit (Lieban, 1977). From childhood, people are socialized to distinguish between acceptable and unacceptable foods, those that are beneficial and desirable and those that are dangerous, low status, and undesirable (Harris, 1985). Preparation techniques are passed down within the culture and consumption patterns are replicated at small events like the evening meal as well as more momentous occasions like church dinners and weddings. Peoples' dietary patterns are an integral part of their identities (Farb and Armelagos, 1980); thus, attempts to change an individual's food habits are likely to meet with opposition.

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[6] Not surprisingly, the males in my study were, as a whole, younger than the females. Men do not live as long as women and despite the "crossover effect" there were relatively few African-American men 65 and over who participated in my study (n=16). I included all of the black men 65 and older I could contact, but few (31%) tended to be the in the oldest group. Despite all of this, the oldest person in my study was, at the time, 89 and male.

Second, dietary modification or embarking on an exercise regime is difficult to achieve because the threat posed to health by a poor diet, obesity, or sedentary lifestyle may be perceived as only tenuosly related to food intake. Older people may find it increasingly difficult to reduce their weight. In fact, moderate weight gains concomitant with old age seem to be "natural" as such increases are not associated with higher mortality rates (Kaplan, 1994). Furthermore, unlike taking an antibiotic injection for an infection, the payoff for dieting or exercise is so delayed that it loses its urgency, while the sacrifice is immediate and recurring (Becker et al., 1977). Many people believe there actually is no reward for dieting and it might even be hazardous to one's health (Chubon, 1989). This idea was proposed by a number of my participants, many of whom report feeling fatigued and weakened after weight loss. Finally, because our society associates thinness with physical attractiveness, losing weight may be perceived as important only if one desires to look conventionally attractive rather than important for physical well-being (Haynes, Taylor, and Sackett, 1979).

Dietary modification may be further complicated by lack of information or conflicting information. Although, for example, all of the participants in my study were aware that they "ought to cut down on fat and salt," very few knew the guidelines for sodium consumption and almost no one could distinguish between saturated and unsaturated fats. Fewer than half had been given information recommending particular foods or diet plans and those who had been given such diets quickly abandoned them generally due to cultural inappropriateness and inconvenience. One eighty-two year old woman noted that the doctor had given her a diet plan after her first stroke, but "there was nothing on it I was used to eating. So I gave it a week and that was all. " Now she just uses her common sense and she "don't worry about fat none because I don't eat much fat."

A further example of lack of information among this sample is the over use of "lite salt." Approximately one-third of my study participants used it, often liberally, incorrectly assuming it contains no sodium and is therefore a harmless substitute appropriate to a low salt diet. In reality, "lite salt" contains approximately half the sodium of regular table salt and may cause hyperkalemia in those individuals taking potassium-retaining diuretics or potassium supplements, or in those patients with renal impairments (Kaplan, 1994). Additional research should be done concerning use and overuse of such products and their potential affect on hypertension.

In addition, increasing use of processed and "fast" foods presents a challenge to sodium and fat restricted diets. It is estimated, for example, that 75% of average sodium consumption is derived from processed foods and that one out of every five Americans eats at a fast food restaurant daily (Kaplan, 1994).

Finally, dietary nonadherence among an elderly indigent sample may result from inaccessibility of resources. Individuals may have difficulty with recommendations that include more fresh fruits and vegetables if they do not have access to transportation for shopping. Furthermore, such recommended items may be more expensive than staples such as canned vegetables, starches, etc.

Summary

I hope to have conveyed the considerable amount of confusion and curiosity surrounding adherence issues. Researchers still wrangle over definitions and measurements of, and factors relevant to, adherence. My approach was to take a broad and all-encompassing perspective on this health behavior and let the people in my study articulate their own difficulties and successes with following their physicians' advice.

One of the most striking results of my study is the relatively high levels of adherence among this sample. While researchers predict low levels of adherence for dietary change, particularly among older African-Americans, I found that two thirds of my sample were moderately to highly likely to follow treatment recommendations. I also discovered that treatment duration and education are highly correlated with adherence level, while gender and age seem to have little to do with the adherence. Those who have been under treatment for a relatively brief period of time and those with higher education are more likely to follow physician's treatment recommendations. The next chapter further explores adherence issues and dietary intake patterns among African-Americans in general and my study sample in particular.

CHAPTER 3
DIETARY PATTERNS

It is far from surprising that most literature on adherence to dietary recommendations concludes that people have difficulty modifying a diet to which they have become accustomed. There is a reluctance to change food patterns that individuals have enjoyed for many years because food is often integrally connected to our identity and cultural background.

In this chapter, I discuss the traditional African-American diet[1], specifically focusing on older people and the major elements implicated in coronary-related disease: overconsumption, sodium, and fat. The primary questions relevant to my study on African-American dietary habits include; What types of foods are consumed? Are consumption patterns unique to southern blacks? And, finally, how do people select their diets? Do they select foods that are beneficial and consistent with medical recommendations specifically to minimize disease risks? Or, are people choosing diets that might place them at greater risk for disease because of custom or lack of information?

Eating as a Cultural Institution

Farb and Armelagos' (1980, p. 11) statement "all animals feed, but humans alone eat" aptly describes the idea that humans define themselves and their culture, in part, by the food they eat . Cultural expression, social institutions, and individual ideas, identities, and behaviors are inseparable from sustenance. "You are what you eat," "food is the way to a man's heart" and so on, are familiar adages expressive of the intimate triad of individual, culture, and food.

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[1] Because of the proliferation of surveys over the past several years, there are finally enough data to provide a clear understanding of intake patterns among traditionally neglected African-Americans of all age groups. While Jerome (1988) faults these surveys for lack of regional specificity, national data give us a clearer picture of who is eating what.

There are a multitude of reasons why food constitutes such a vital element of our being and cultural background. On a fundamental level, of course, without nourishment humans die. But humans have altered, embellished, and applied intricate and rigid rules to edible substances to satisfy needs beyond mere survival. While one culture observes a food avoidance on, say, monkey brains, another group considers monkey brains a luxury food to be eaten only on special occasions, by particular people, and after a specified mode of preparation. How we obtain, prepare, and partake of food expresses our basic humanity, symbolically and practically.

As Harris writes, "When India's Hindus spurn beef, Jews and Muslims abominate pork and Americans recoil at the thought of dog stew, something beyond mere digestive physiology is shaping the definition of what's good to eat." (1985, p. 14) Various theorists propose explanations for how or why food customs, including aversions and attractions, are created. One notion is that humans tend to have an intrinsic knowledge of dietary needs and avoidance. Levi-Strauss proposed a "mentalist" explanation --that eating behavior is a part of a cultural code that expresses the world view of each society. Hence, some foods are "good to think" (hence, to eat) while others are "bad to think" (hence, to eat). Such information is passed through the generations, enculturating young people to accept, maintain, and re-teach rules about food, among other things.

On the other side of the spectrum is a materialistic perspective, such as that of Marvin Harris, that claims that cultures self-impose food rules according to habitat or environmental conditions. By the time people have forgotten the origin and rationale behind these restrictions and sanctions, the rules have become integrated into the social structure and reinforced by the culture's ideology. For example, Harris proposes that the true origin of the dietary proscriptions against eating pork involved competition between pigs and humans for the same foods rather than God-given edicts.[2] Farb and Armelagos (1980) embrace a combination of the enculturation and the materialist explanations. Not only does culture dictate rules about food, but food also plays an important role in defining and reinforcing social memberships. The word com*pan*ion, for instance, (from the Latin roots of "one who eats bread with another") reminds us of this association (Farb and Armelagos, 1980).

Even in a heterogeneous country like the United States that upholds assimilation as a national ideal, diet is often the last vestige of ethnic or cultural membership. For example, many Mormons participate in numerous social institutions in which they are indistinguishable from non-Mormons while avoiding alcohol and beverages containing caffeine. Most Jews and Muslims in the United States, unrecognizable in fashion and, aside from new immigrants, in language, differ from mainstream Americans because they do not eat pork. And, finally, though a half century has passed since the great migration, northern inner city blacks can easily locate soul food kitchens serving traditional southern "home-style" cuisine. In the next section, these African-American consumption patterns are explored.

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[2] 'Of their flesh you shall not eat, and their carcasses you shall not touch; they are unclean to you [Lev, 11:1] everyone who touches them shall be unclean[Lev, 11:24]" and 'These things only He has forbidden you: carrion, blood, and the flesh of swine" [Holy Koran, 2: 168]. While Jews and Muslims claim that these religious documents forbid pork because of uncleanness, Harris convincingly argues that pigs' poor climatic adaptation and their competition with humans over food make them unsuitable to raise. Unlike animals who chew their cud, pigs are not ruminants (cannot digest the cellulose available to grazing animals), thus, they require and compete for the same crops that humans eat (1985, p. 72).

African-American Diet

Researchers have attributed high intakes of sodium and fat, low fiber and complex carbohydrates, and over-consumption of calories but under-nutrition to a traditional African-American diet and to disproportionate incidence of cardiovascular disease, hypertension, diabetes and cancers (Saunders and Williams, 1975). However, my discussions of food intake with many older African-Americans reveal a philosophy of moderation and balance. To maintain health requires following simple but essential rules like those echoed by one participant, "read the Bible daily, don't eat all that rich food, and keep yourself clean on the inside and outside." The goal is "a harmonious integration of forces within the person coupled with a corresponding harmony in his relationships with other persons and the spirit world" (Franl, 1977, as quoted in Snow, 1993, p. 69). While not every participant employs this philosophy of moderation and adherence to dietary recommendations, my data reveal enough of a disjuncture with the traditional literature to warrant skepticism and rethink the victim-blaming approach many researchers use to explain differentials in disease prevalence related to dietary etiology[3].

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[3] Particularly regarding salt consumption, the majority of participants exceed standard salt intake recommendations for hypertensives.

Black-White Dietary Intake Differences

Some researchers have discovered that differences between the diet of elderly[4] blacks and whites are not great enough to account for such dramatically different disease incidence (Jerome, 1988; Lieberman, 1988b).[5] Studies indicate that both groups suffer from similar dietary pitfalls, including overconsumption of fat and and underconsumption of protein. As the chart below indicates, many of the same foods are eaten by both older blacks and older whites.

Despite these similarities, many differences exist between black and white consumption patterns. While 36% of white men and 34% of white women select items from each of the food groups daily only 22% of black men and 23% of black women have such a well-rounded diet. In addition, blacks are much more likely to forgo vegetables and fruits daily than are whites. Furthermore, many more blacks than whites report omitting two to three food groups per day (Kant et al., 1991). Another study indicates that more blacks than whites skip meals daily, possibly explaining why blacks consume three hundred fewer calories daily (Jerome, 1988).[6]

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[4] Defined throughout this dissertation as those over 65 years of age.

[5] Jerome, noting some seeming inconsistencies in the data such as greater obesity among black women despite their self-reported underconsumption of calories, calls into question the practice of using identical criteria cross-ethnically. As Jerome writes, "In the United States, comparison of blacks with whites is appropriate and essential when using social and economic criteria. However, physical and biological differences between the races make such comparisons untenable in some circumstances" (1988, p. 139) and calls for creating appropriate and unique physical and dietary guidelines for blacks.

[6] Forty percent of black men between 65-74 report skipping lunch daily (Jerome, 1988).

Table 3-1: Most commonly eaten foods (self-reported).

Whites	Blacks
sugar-free beverages	sugar-free beverages
dairy	dairy
fruits	fruits
vegetables	sugar products
grains	grains
sugar products	vegetables
meats	meats

Source: Jerome, 1988, p. 131

Black women frequently underconsume protein, phosphorous, and potassium. Black male diets tend to be deficient in iron, potassium, and carbohydrates. Both black men and women consume less dietary fiber and calcium than their white counterparts (Kumanyika and Ewart, 1989). Nutritional inadequacies overall are most notable among African-American women, then African-American men, followed by whites of both genders (Jerome, 1988). Table 3-2 compares daily caloric consumption levels among whites and blacks and reveals that despite similar self-reported caloric intakes, a disproportionate percentage of blacks are overweight.

Table 3-2: Recommended daily allowance (RDA) for caloric intake and percent of caloric intake among whites and blacks, age 65-74.

	RDA	Caloric Intake % of RDA	% overweight
white males	2400	76%	25.8%
black males	2400	76%	26.4%
white females	1800	73%	36.5%
black females	1800	73%	61%

Source: Lieberman, 1988b.

Especially pertinent to cardiovascular concerns, African-Americans women tend to be more obese and blacks in general are thought to have higher dietary intakes of sodium and fat than other groups (Kumanyika and Ewart, 1989; Lieberman, 1988a; Lieberman, 1988b). Since these topics (overconsumption, particularly of sodium and fats) were mentioned by each participants' physician as their primary concerns in hypertensives' diets, I based my assessment of adherence to hypertensive treatment recommendations on these three issues and discuss them in the following pages.

Intake Patterns of the Study Sample

Figure 3-1 and Tables 3-3 and 3-4 display my study sample's dietary intake patterns. Relatively low caloric consumption occurring in conjunction with significant levels of overweight calls into question the assumption that overeating causes of overweight in this sample. Issues such as the classification "overweight", decreased caloric needs of a relatively sedentary sample and the reliability of self-reports may shed some light on the seeming contradiction between supposed underconsumption and overweight.

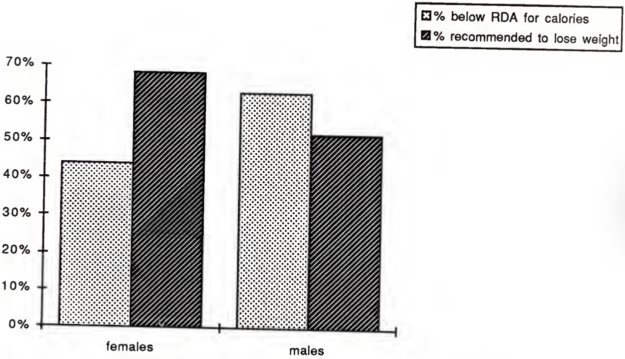

Figure 3-1: Percent of study sample with caloric intake below the RDA compared with the % of those recommended by their physician to lose weight (Block, 1981).

Table 3-3 displays the weekly consumption of foods that the dietary intake questionnaire used considers most popular. The food categories are broad enough to accommodate a most general assessment of food consumption patterns. Other food intake survey biases have been discussed (see Chapter 2 on adherence), including variability driven by seasonal and income fluctuations, informant misreporting, and poor or culturally inappropriate survey design. While the food frequency instrument used in this study (Block, 1981) has been faulted for its small serving sizes (Dr. L.S. Lieberman, 1994, personal communication), it is appropriate to African-American populations and relatively easy to use.

Table 3-3: Rank order of study sample's (n=41) most frequently consumed foods, mean weekly consumption and standard deviation, based on Block (1981).

Rank	food	mean	standard deviation
1	sweets	15.4	16.8
2	vegetables	15.3	6.6
3	fruit/juice	12.5	8.2
4	whole grains	8.1	9.3
5	butter/ margarine	7.3	7.6
6	fish/chicken	4.4	2.2
7	eggs	3.5	5.2
8	beef	2.3	2.4
9	cheese	1.8	2
9	ice cream	1.8	2.7
10	hot dogs	1.7	2.4
11	milk	1.2	2.6
12	pork	.50	.90

Participants consumed more weekly servings of sweets (pastries, nondietetic sodas, candy, etc.) than any other food item. However, outliers such as the participant reporting to consume 81 servings of sweets create large standard deviations and potentially skew the outcome. Most noticeable outliers include eggs (with one person consuming 28 per week) and hot dogs (with one person exceeding the mean score by eight, or eating ten hot dogs weekly).

There is a good deal of "consumption consensus" (relatively small standard deviations) on several food items. Most study participants appear to eat an average of two to three servings of fruits and vegetables each day and fish or chicken every other day. Very few people eat more than one serving of pork a week, and most eat considerably less. Beef also constitutes a minimal component in study members' diet, with all but four individuals consuming fewer than four servings weekly.

My study sample's dairy consumption exceeds frequencies reported for African-Americans in most standard dietary literature (Saunders and Williams, 1975; Kumanyika and Ewart, 1989). Combining cheese, milk, and ice cream, most participants consume close to one serving of dairy products daily. Table 3-4 indicates the daily nutrient intake of the study sample and whether these mean intakes fall within RDA guidelines as described by Block (1981) and the National Research Council (1989).

Table 3-4: Study sample's mean daily nutrient intake and fulfillment of basic RDA guidelines, based on Block (1981) and National Research Council (1989).

daily nutrients	mean for women	mean for men	recommended ranges[7]
calories	1684 calories	1989 calories	depends on age, sex, activity level
protein	64 g	307 g	63 g for men 50 g for women
total fat	78 g	73 g	<30% total cal
saturated fat	28 g	34 g	1/3 of fat
carbohydrates	178 g	220 g	50-60% total cal
calcium	628 mg	727 mg	800 mg
phosphorus	1054 mg	1120 mg	800 mg
iron	11 mg	12 mg	10 mg
sodium	3894 mg	3994 mg	<2400 mg
vitamin A	6776 I.U.	6763 I.U.	4000-5000 I.U[8].
thiamin (B1)	1.1 mg	1.2 mg	1-1.2 mg
riboflavin (B2)	1.4 mg	1.6 mg	1.2-1.4 mg
niacin	16 mg	17 mg	13-15 mg
vitamin C	114 mg	121 mg	60 mg
poly unsat/ sat fat ratio	1.3	0.44	0.6-1.0
cholesterol	291 mg	258 mg	150-300 mg
dietary fiber	14 g	14 g	20-35 grams

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[7] These are the new, revised RDAs (except where indicated) for adults over fifty years of age (National Research Council, 1989).

[8] It should be noted that the Block instrument predates the new RDA guidelines and some of the units of measurement, such as that for Vitamin A and the polyunsaturated/saturated fat ratio have changed.

Meal Patterns and Menus

A twenty-four hour dietary recall reveals that most of my study participants eat two full meals and two snacks each day. Consistent with the literature, approximately two-thirds of my sample ate only two meals per day, usually skipping lunch (Jerome, 1988). Typically, study participants began breakfast early in the day, eating cold cereal with whole or 2% milk (35%) or one or two pieces of toast with margarine or butter (45%). Only one or two individuals regularly consume eggs and meats for breakfast. Most breakfasts include a piece of fruit or juice (80%) and most drink a cup or two of coffee, or less frequently tea.

Those study participants who do not regularly consume lunch tend to have a mid-morning and/or midafternoon snack (50% of the study sample). This snack might consist of crackers and peanut butter and a piece of fruit, a dish of ice cream, or cookies and a cup of coffee or glass of iced tea. Some "snackers" will drink only a glass or two of water, soda, or juice between breakfast and dinner.

Those consuming lunch (35% of the study sample) either eat a small meal (approximately 80% of those eating lunch) or a very large meal (20% of those eating lunch). A smaller lunch typically consists of a sandwich, a piece of fruit or cookies, and a beverage, or warmed up macaroni and cheese, spaghetti, or last night's casserole with a beverage. Lunchtime beverages typically include (in order of popularity) water, iced tea, dietetic or non-dietetic soda, Kool-Aid or another punch or a hot drink like coffee. Sandwiches are most often cheese or luncheon meats on white or, less often, wheat bread. Some individuals add chips or a salad like cole slaw to their meals.

Those who consume large meals (called "dinner") for lunch usually eat what constitutes "supper" for most people-i.e., a meat dish, potatoes or rice, bread, and two vegetables. These individuals will generally eat a light snack later in the day. This pattern, more noticeable among men than women, may have its origin in individuals' employment as farm laborers.

Supper, or the evening meal, is most people's largest meal. A typical dinner might consist of baked chicken,fish, or a hamburger; a large serving of rice, potatoes, or pasta; two servings of vegetables, often greens and frozen vegetable combinations; and possibly a piece of bread. Beverages served with dinner include water, tea, or punch. Most people in my study did not have coffee or tea and dessert after dinner. Approximately 65% note that they do eat a snack after dinner and before bed. Cookies, crackers, ice cream, fruit, fruit cocktail, gelatin and small sandwiches are often chosen for evening snacks.

Meal components vary according to season and circumstances. Since during the winter, for example, collard, mustard, and turnip greens are abundant, some people prepare a large pot of greens and eat only vegetables for dinner. Similarly, the availability of cantaloupe or strawberries in late spring or pecans in fall might determine snacks. The study sample eats at a restaurant (including fast food) an average of twice a month. Most people report that while they seldom fry fish or chicken at home, they might select these foods when they eat out. Finally, events such as church dinners every other month on Sunday dramatically expand food selection, but, like going out to eat, do not occur frequently enough to alter dietary intake patterns.

I am unable to ascertain how often the study sample consumes prepared or pre-packaged foods, as my intake inventories asked informants what foods they regularly eat and the mode of preparation (i.e., fried, baked) rather than their origin (i.e. homemade or from a can or box). This, however, is an important question as it is estimated that prepared foods may contribute half to three-quarters of daily sodium intake (Kaplan, 1994).

Fat

Fat consumption is problematic to control because it not only is an essential ingredient in most dishes, but fat and oil are also frequently used in food preparation. Frying and slowly stewing using fat are two common cooking techniques used among African-Americans, whose diet is often reported to be higher in fat than that of whites (Borrud et al., 1989; Jerome, 1988). Some of the differences in fat consumption is supposedly due to a higher intake of eggs, pork,[9] luncheon meats and liver (Lieberman, 1988a) among blacks but less fat is derived from dairy products, possibly due to higher lactose intolerance (Borrud et al., 1989). Meat ranked seventh among the seven major food groups among both blacks and whites, but Jerome reports that blacks tend to consume fattier meats such as luncheon meats and sausages while whites eat lean steak, roast beef, and luncheon ham most regularly (1988). Both groups report eating ground beef frequently.

A substantially higher pork intake among most African-Americans might account for a greater fat consumption, particularly of saturated fats. For example, an analysis of the content of various pork products reveals that cooked pig's feet contains 16 percent fat; cooked pig's tail 17% fat; cooked chitterlings 28% fat; and cooked cracklins 76% fat (Goldsmith and Davidson, 1977).

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[9] Most Americans, however, choose beef over pork. In fact, Harris notes that of the 150 pounds of meat consumed per person annually, 60% is beef or veal; 39% is pork; 1% is lamb or mutton (1985). Very few Americans eat goat; probably Southern blacks consume most of the goat sold in the United States, usually barbecued.

In addition, traditional food preparation techniques are said to contribute to higher fat consumption among African-Americans. More liberal use of animal fats such as white bacon and lard when cooking (especially frying) may be responsible for a higher cholesterol intake among blacks (Borrud et al., 1989). Vegetables, consumed frequently among older African-Americans, are usually prepared by boiling on low heat for an extended period with plentiful animal fats. Fatback, according to Goldsmith and Davidson's sample of black women, is the preferred flavoring and fat when preparing collards and turnips greens, followed by margarine, bacon grease, then oil (1977). This finding is consistent with my study; 61% of my respondents flavored vegetables with fatback, lard, or other pork fats, 16% with butter, and 24% with margarine. When preparing foods other than vegetables (including meats, pasta, etc.), my study sample used a greater variety of fats. Twenty-two percent favored stick or soft margarine, 17% butter and 17% fatback, and 44% oil. It is therefore incorrect to assume African-Americans prepare everything with animal fats; rather, fatback, white bacon and the like are usually used for flavoring when preparing vegetables.[10]

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[10] The dietary analysis program used in my study incorporates frequency of fat use, type of fats used, cooking procedures, etc. (Block, 1981). The instrument includes the following questions related to fat:
How often do you eat the skin on chicken? How often do you eat the fat on meat? (seldom/never, sometimes, often).
How often do you use fat or oil in cooking? ____ times per____(day, week)
How many servings of butter and margarine do you eat per day, week, etc.?

In addition, it is incorrect to assume that because foods are "traditional," they are "unhealthy." My study sample, for example, eats many of the dishes considered "traditional" (sweet potatoes and sweet potato pie, greens, cornbread, catfish, smothered chicken, rice dishes, etc.), but most participants' fat consumption falls within dietary guidelines. The sample's high vitamins A and C intake, for instance, may be due to the inclusion of foods like sweet potatoes, greens, and citrus fruits. On the other hand, the study sample's reduced use of pork products has probably decreased fat consumption.

Despite the above mentioned preparation techniques and regular consumption of such fat-laden dishes as greens, the issue of over consumption of fat among blacks remains unresolved. The most recent analysis of the 1987 National Health Interview Survey reported, for example, that blacks are more likely than whites to be in the lowest fat consumption quartile (Subar et al., 1994). This finding contradicts previous surveys, but, as Table 3-5 indicates, is more consistent with my data.

In addition, my study sample was more likely than not to follow physician's recommendation to reduce fat intake to 30% or less of daily caloric intake. Forty-six percent (n=19) are classified as low likelihood of following fat recommendations while 54% (n=22) are higher adherers.[11] Of all the demographic variables, adherence to recommended fat intake was significantly correlated only with household composition and education. These correlations are displayed in Table 3-5 and Table 3-6.

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[11] That is, those people whose diets approximate the physician's recommended fat intake. Those I have grouped as "low adherers" exceed the 30% of calories from fat recommendation.

Table 3-5: Adherence to fat recommendations by household composition

Adherence level	Household composition			
	alone	spouse	children & grandchild	spouse, children, & grandchild
low	54%(10)	10%(2)	24%(5)	10%(2)
high	18%(4)	23%(5)	32%(7)	27%(6)

p=.041, n=41, chi square=8.28

Contrary to my original hypothesis and discussed at length in the social support chapter, closer adherence to fat guidelines appears correlated with living with others, despite the fact that most people (two-thirds of the sample) shop for and prepare their own meals. Those who live alone are disproportionately represented in the lower fat adherence group, while high adherers tend to live with other household members. Perhaps those who live with others are more likely to be reminded of their physician's recommendations to reduce fat intake.

Table 3-6: Adherence to fat recommendations by education recommendations to reduce fat intake.

Adherence level	Education		
	high school	middle school	primary school
low	23%(5)	50%(5)	90%(9)
high	73%(16)	50%(5)	10%(1)

p=.002, n=41, chi square=12.01

Unsurprisingly, there is a direct relationship between education and fat adherence: 73% of those with a high school education compared to only 4% with primary school education are considered high adherers. It is reasonable to assume those with more education may have a greater awareness of health matters, particularly those endorsed by the various news media.

When discussing fat intake and cholesterol with my study participants, several themes evolved. First, there is a general awareness that a diet high in fat is harmful to one's health: ninety-three percent of my sample believe that fatty foods contribute to high blood pressure, as opposed to 59% who link cigarette smoking with high blood pressure. However, most people in my study believe that enjoying a little bit of fried or otherwise fatty food occasionally is acceptable. One 76 year old woman summarizes this sentiment by saying, "Now my doctor tells me that I need to keep away from all of that fat and I believe he knows what he is talking about. But every once in a while, just once in a while, I'll make me up a big old plate of fried okra and I'll sure enjoy it." This "once in a while" strategy is consistent with a more general approach practiced by much of the study sample of health maintenance through moderation.

Second, despite their awareness of fat as potentially harmful, many respondents do not express concern over their intake. I heard repeatedly, "I don't worry about fat because I don't eat much of it." In fact, though statistical correlations between adherence to fat recommendations and concern about fat intake are insignificant in this study, a trend suggests that high adherers are slightly less concerned about fat intake levels than less adherent individuals. Among the group that follows treatment recommendations for fat intake, 46% (n=11) noted they are "not at all concerned about how much fat they eat" as opposed to 35% (n=6) in the lower fat adherence group. Approximately a third of both the higher adherence group and the lower adherence group endorsed the statement, "I am very concerned about how much fat I eat."

Very few of my informants responded affirmatively when asked about whether or not cholesterol intake constitutes a concern and if they are trying to limit intake. Only a few participants were able to define or describe cholesterol, though most had heard of it and could name several foods high in cholesterol. Ninety-three percent of those in the low adherence group and 79% of those in the high adherence group for fat recommendations state they are not trying to limit their cholesterol intake.

What accounts for such a dramatic difference in perspectives on cholesterol between my study sample and the general public? First, there may be an informational lag that serves to minimize concern over cholesterol intake. Since, as Chapter 4 on health beliefs will illustrate, most people do not obtain the majority of their health information from written or broadcast media, largely responsible for highlighting the dangers of cholesterol, most informants have not received much information about cholesterol. Second, for those who are more aware about the potential hazards of cholesterol, the public health warnings over cholesterol may seem too unconfirmed to constitute a real risk factor in many people's opinions. Many study participants recognize that the precise relationship of cholesterol to heart disease is far from resolved (Prevention Magazine Report, 1987).[12]

Finally, while cholesterol per se may not constitute a major concern, my study sample seems to place fats in a general "bad" foods category that also includes salty and sugary foods. Most participants fail to distinguish among these foods, only warning that one must be careful to avoid over consumption, lest they cause a stroke, run up your pressure, etc. Interestingly, sugar is perceived a "bad" food not for any diabetes-related reason; rather, people consider sugar to be "fattening" which, like fat itself, contributes to weight gain and ultimately to high blood pressure and strokes.

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[12] In general, however, the National Institutes of Health Offices of Medical Application of Research has concluded that Americans overconsume cholesterol and that those with levels in the upper twenty-fifth percentile should be medically treated (Prevention Magazine Report, 1987).

Salt

Humans have long responded to the physiological need for salt by going to great lengths and sometimes even changing the course of history to obtain the substance (Denton, 1984). People have imbued salt with symbolism in addition to mundanely adding the substance to most dishes. Biblical passages such as , "ye are the salt of the earth" and "ought ye not to know that the Lord God of Israel gave the kingdom over Israel to David forever, even to him and his sons by a covenant of salt?" (II Chronicles xiii, as cited in Denton, 1984) exemplifies salt's symbolic essence. Throughout history, salt has been used as currency,[13] as a form of taxation,[14] as a precious trade commodity[15] and as a symbol of political oppression.[16]

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[13] For example, during his travels to central Asia, Marco Polo reported that cakes of salt were embossed with the Great Khan's head and used as money . In addition, Denton (1984) cites Parson's (1951) observation that "salt money" was being used in parts of Africa, Borneo, China and other parts of the East .

[14] In ancient Egypt, a tax on salt ("halike") contributed to the king's revenue and illustrated the social standing of people within the society. Women paid less of the tax than men; slaves paid half; children and prominent officials were exempt (Denton, 1984).

[15] From the sixth until the fifteen century, Venice sought out and controlled the monopoly on the salt trade. During the fourteenth century, Venice supplied salt to civilizations as far away as Alexandria, Cyprus, and the Balearic Islands. In addition, according to Denton, salt has a darker history of involvement in the slave trade. In the interior, children were often sold into slavery in return for salt.

[16] In the relatively recent history of salt, Gandhi's "salt march" (1930) is often cited as a catalyst for the end of British colonial rule in India and, eventually, all around the globe.

Humans have always desired salt as a food preserver and flavor enhancer.[17] Humans' internal salinity is substantial; the average adult contains a quarter of a pound of salt contained mostly in the fluid between the cells and in the skeleton (Kaplan, 1994). Salt has been and continues to be so crucial to humanity that the monetary measure of our success, our ***sal*** ary, is based on the Latin word for salt. Similarly, statements like "worth one's weight in salt" reminds us of a not too distant past when the mineral was viewed as important but difficult to obtain and therefore much treasured.

Starting at the turn of the century, however, salt became correlated with a host of problems (Kaplan, 1994). Excessive intake interferes with physiologic mineral balance which evolved in a world full of potassium but not of sodium (Folkow, 1992). The resultant imbalance of potassium and sodium ratios has been implicated in improper functioning of the cardiovascular system, most notably hypertension and other heart-related illnesses among the estimated 20 million Americans with salt sensitivity (Kaplan, 1994). With the average American consuming five teaspoons of salt daily (despite our bodies' need for less than a quarter of a teaspoon), researchers have increasingly recognized salt consumption as a risk factor for multiple chronic disease (Farb and Armelagos, 1980). Some recent studies, however, have cast doubt on the association between table salt and hypertension. While much of the medical literature supports the efficacy of a severely sodium-restricted diet (intake of 0.5-3.0 gm./daily) for controlling hypertension, most practitioners acknowledge that few can maintain such dietary control. In addition, medical researchers have found that diuretics show a similar mode of action to sodium-restricted diets without the challenges dietary modification entails. In addition, as Folkow (1992) points out, researchers do not agree on standards of salt reduction and often issue recommendations that are confusing and vague, at best, and inaccurate at worst.

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[17] Although various ethnographers report that many ethnic groups have never adopted salt. For example, the nomadic tribes of Russia and Siberia (who had great salt beds, outcroppings, and lakes); the Kirghiz of Turkestan, the Damaras in southwestern Africa, and upon first contact, many Native American groups. Denton (1984) theorizes that these largely nomadic pastoralist groups do not use salt because their predominantly milk and meat diets contain sufficient sodium to satisfy a physiological need. Agriculturalists, on the other hand, primarily consume cereals and vegetables that are low in salt and, therefore, must seek out other sources of salt. While there are some inconsistencies with this theory, Denton's explanation is quite interesting.

Finally, over the past few decades, researchers have begun to speculate that African-Americans' bodies react differently to salt than do other sample groups, requiring reconsideration of a universal sodium restrictions. Such studies mark a change in scholarly perspectives from blaming salt consumption habits for HBP to seeking a more all-encompassing perspective on blacks and salt. Saunders notes that while hypertension etiology remains obscure, greater prevalence among blacks may be attributable to "a difference in sodium handling," including greater salt sensitivity (1991, p. 608). Further elaborating on this theme of salt sensitivity, Folkow (1992) notes that human evolution may have favored salt conservation in places of salt scarcity, such as Africa. In today's salt-abundant society, this mechanism may aggravate or precipitate hypertension, particularly in conjunction with other factors like economic deprivation and its accompanying stressors. Others, including Frisancho, speculate that lower potassium intakes among blacks plus this salt sensitivity, may contribute to a greater incidence of hypertension (Jerome, 1988). Kumanyika and Bonner believe that blacks are less efficient at sodium excretion than other groups (1985).

The extent of salt use among African-Americans is increasingly being reconsidered as some studies appear to contradict themselves. NHANES I data indicate that aside from the youngest adult groups,[18] blacks consume less salt than whites. Other studies indicate high sodium use by African-Americans. One study of salt purchasing habits in Texas reveals greater amounts of table salt purchased at predominantly black-patronized supermarkets than those in other parts of town (Kumanyika and Bonner, 1985). In addition blacks are said to rely more on processed foods that tend to be high in salt, sugar, and fat. Furthermore, many of the therapies thought to counteract a dangerously high volume of blood ("high blood") include astringent, sodium-laden substances like pickle and olive juice (Kumanyika and Bonner, 1985).

Few (27%) in my sample fall into the high adherence group for sodium intake.[19] There appears to be no relationship between adherence to salt recommendations and the sociodemographic variables of age, education, household composition and income or sex, probably because nearly everyone exceeds the treatment recommendations. As the next section explains, however, despite the overall low level of adherence to salt recommendations, most study participants view salt as a threat to their health.

Perceptions of Salt

Table 3-7 indicates that, despite the traditional inclusion of sodium-laden foods into the African-American diet, most of my study members consider salt a health hazard and many report they have reduced their salt intake, though they still exceed recommended intake levels. Awareness of the harmful effects of salt overconsumption is high: ninety-five percent of my study sample believes that salt can contribute to raising blood pressure. Consequently, most informants feel that a major means of addressing this concern is to reduce their salt intake.

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[18] Black women age 20-24 and black men 25-34 consume more salt than their white counterparts (as cited in Jerome, 1988).

[19] "Low adherence" groups refers to those study participants who have exceed their physicians recommendation of a 2000 mg daily sodium intake. The "high adherence" group meets that recommendation.

Table 3-7: Perceptions of the need to reduce salt intake by adherence to recommended salt intake grouping.

Perception	Adherence to salt recommendation		
	low (73%)	high (27%)	total(100%)
I don't need to worry	---	---	---
I probably should reduce, but haven't tried	20%(6)	---	15%(6)
I've been unsuccessfully trying to reduce	23%(7)	---	17%(7)
I've cut down quite a bit	57%(17)	100%(11)	68%(28)

p=.03, n=41, chi square=6.98

Study participants employ numerous strategies to decrease salt consumption, including limiting table salt use, using salt substitutes, and "staying away from certain foods," generally salty and fatty foods such as pork and fried chicken. While statistically insignificant, Table 3-8 shows a trend of more adherent people in this study adding less salt at the table.

Table 3-8: Responses to "How often do you usually add salt to your food at the table?" by salt adherence grouping.

	Adherence to salt recommendation		
Add salt?	low (73%)	high (27%)	total (100%)
almost always	17%(5)	---	12%(2)
sometimes	40%(12)	---	29%(12)
rarely	30%(9)	55%(6)	37%(15)
never	13%(4)	45%(5)	22%(9)

p=.08, n=41, chi square=6.67

As both tables illustrate, there is a correlation between adherence level and salt reduction strategies. Slightly over half of the lower adherence group, as opposed to all of the higher adherence group, reported that they have cut down "quite a bit" on salt consumption. Forty-three percent of the lower adherence group agreed with that they should reduce sodium intake, but have not tried or have not been successful in their attempts. As Table 3-8 displays, while 57% of the lower adherence group report they always or sometimes add salt to their food, no one in the higher adherence group responded similarly. The higher adherence group reported that they either rarely (55%) or never (45%) add salt, while only 30% and 13%, respectively, of those less likely to follow the doctor's recommendations for salt intake respond the same.

In order to successfully reduce ones salt consumption, it seems necessary to become accustomed to less salty tasting dishes. When asked, "What problems have you had in reducing your salt intake?" most (60%)

people in the low adherence group expressed the opinion that "food just doesn't taste right" or "tastes bad" or is "too fresh." One woman noted that she lost her appetite when she first stopped using salt. Another man said, defeatedly, that if you do not season your food the way you like it, then it will just lead to other cravings, like salty snacks.

On the other hand, nearly three-quarters of the high adherence group felt that reducing salt intake was not a problem, or that it became decreasingly problematic over time. A 67 year old man in the more adherent group said, "it wasn't no problem; the doctor just gave me the choice of living or dying." A woman in this same group declared, "like they say on the TV 'just do it'- well, I just did it; I just stopped using all that salt." Others mentioned that they seemed to "grow out of using a lot of salt." One 68 year old (higher adherence group) woman reports that as a child she loved salt so much that her mother would give her and her siblings sacks of rock salt to suck on. Then, at about 50 years old, she just "grew out of wanting all that salt" and has not eaten much since.

Finally, while many individuals report having reduced their salt intake at home, very few claim that they avoid eating out at restaurants because of salt concerns. This lack of reluctance to eat out may be due to the infrequency of dining out (the mean number of restaurant meals per month is two in this sample). Only four individuals, two from each adherence groups, did not eat at restaurants because of concern over salt. Those who were cautious about eating out tend to avoid fast food restaurants, though one person rejected all restaurants. Several respondents noted that they tend to select what they believe are dishes lower in salt and fat. One woman from the lower adherent group says that she is not concerned about dining out because she feels that restaurants do not salt their food as much as she does at home.

Why, then, if this sample displays a heightened awareness of dangers associated with too much salt, does adherence to low salt dietary recommendations remain minimal? I speculate that the combination of such awareness in conjunction with many people's declaration that they "have cut back quite a bit" leads people to a false sense of having decreased salt intake to recommended levels. In addition, many informants relied on vague and subjective criteria for salt use, such as, "if I can taste the salt, then I know that it's too salty for me." Without consultations with a registered dietician and continuous and proper dietary monitoring, even those committed to reducing salt in their diets may not realize that they are still consuming dangerously high quantities of salt.

Dietary Change

In a longitudinal study, Jerome (1988) noticed that increased age, poverty,[20] and incidence of disease resulted in some dramatic dietary changes. Such changes fell into two categories, consistent with my own study's findings; moderation or elimination of a particular food and altering preparation styles. First, in Jerome's and my studies, people modified their food choices, frequently decreasing or eliminating pork, sugar, and salt. Over half of my study participants mentioned that they stopped eating pork (though they continue to seasoning with it) either because "the doctor said it is against" them or because they do not like its after-effects. Many people explained that pork (as well as frying or anything greasy) gives them headaches as it is "too rich" or "bad on the blood." In addition to decreasing consumption of or avoiding certain foods, the study sample modified their diets in a number of ways. Some purchase peanuts, peanut butter, crackers, tuna fish labelled "low salt" and crackers and lunch meats labeled "low-fat." Only 29% (n=12) of my informants, however, told me that they or the person primarily responsible for food shopping ever looks for low salt/low fat products.

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[20] Jerome reports that for most participants incomes fell by fifty percent to between $3,000 and $4,999 annually. While Jerome does not speculate on the cause of these decreased incomes, members of my study population have noted that death of a household member (especially males more likely to have a pension) proves quite challenging.

Other notable but infrequently employed strategies to decrease fat include eating only the whites of eggs (three people); cutting down on beef (four people); and using reduced fat foods such as "lite" salad dressings or ice milk. Several of the men mentioned that they started consuming smaller quantities of food after they retired because they did not need as much food to sustain them. One (lower adherent group) woman, however, remains unconvinced of the benefits of low fat/low salt products, noting that "all that diet food will sure enough give you a heart attack." Reducing salt intake, as the above section indicates, seems to be more challenging. While several people did mention using spice substitutes like herbal spice mixes (Mrs. Dash, for instance) as well as lemon juice and pepper, most use a good deal of seasoning salt (such as Accent and "lite" salt). Approximately one-third of my sample reported using "lite" salt to substitute for "regular" table salt.

Alcohol

Very few of my participants discussed decreasing alcohol consumption because only a few mentioned they currently consume any alcohol. Only one informant noted that he stopped drinking red wine because of its pressure raising properties; he now drinks only whiskey. Though seemingly at odds with general health practices, such a statement is consistent with traditional African-American theories that many red substances such as wine, cranberries, liver and beef building up the blood and blood pressure. Mr. Williams' remark, then, concerns the heart rather than the liver. Still, most people consider alcohol, like sugar, a "bad" food to be avoided. In fact, 80% of respondents indicated that alcohol was likely to increase blood pressure.

Changing Cooking Style

Since their initial diagnosis of high blood pressure many respondents have changed their food preparation style, decreasing frying and increasing baking and broiling. Preparation modifications focus on pork and pork products and involve creative ways of minimizing salt and fat intake. For instance, people commonly douse pork in vinegar to "cut the fat." Like the home remedy of drinking vinegar to reduce high blood, the acidity is said to draw out the richness (fat), leaving the meat or blood less dangerous. In addition, several people mentioned "boiling out the salt" in ham, neckbones, or other meats to reduce saltiness. Many participants explained that if they cooked with a neckbone or ham, they would avoid adding other fats or salt.

Recipes

All but one study participant indicated minimal use of recipes, a finding consistent with our diabetes study. People tend to consult recipes only when baking cakes or other sweet dishes. Hence, only seven (17%) people responded affirmatively to "do you try new low fat/salt recipes?." No one modified baking recipes, probably because most baking is done for other people.

"Fresh": Not All It's Cracked Up to Be

My extensive ethnographic interviews reveal a conflict in the use of the term "fresh." While "fresh" or "freshness" in mainstream terminology means wholesome, lively, and full of flavor, study participants define it as undercooked and under spiced to the point of inedibly insipid. "Freshness" is clearly a negative characteristic of food in this study community. Statements frequently heard include "I do add a little salt to my vegetables just to cut down on the freshness" or "I can't stand my food too fresh" illustrate the discordance of meaning. Similar to "raw", most study participants would not consider eating or serving food that had not been, in some way, prepared by thorough cooking and seasoning. In fact, one 65 year old man explained to me how he would prepare his food "too fresh" in order to thwart his family's intrusive appetites. He said he had slowly gotten used to the "freshness" and his family never bothered trying to eat his food thereafter.

How many well-intentioned dietary campaigns have failed because they advocated "freshness" or "Florida fresh"? Of course, everyone in my study also understands the "mainstream" use of the word, but to them freshness remains, as a 74 year old former army cook tells it, "a good way to ruin your food."

Special Diets

A recent investigation conducted by Lee et al. on the dietary intakes of southern rural elderly indicates that almost half (44%) claim to follow a special diet. The most frequently mentioned diets included low sodium (23% reported following one); low fat/cholesterol (18%); diabetic (11%); low calorie

(10%); and high fiber (5%) . Aside from the latter two, these diets were overwhelmingly (over 80%) prescribed by a health professional rather than by sample members themselves. Of those following a reduced calorie diet, 35% self-prescribed the diet while 44% of high fiber diets were self-prescribed (Lee et al., 1993).

Despite this prevalence of special diets in the south and the likelihood for those on special diets to have more nutritionally sound intakes, (lower fat, sodium, calories or higher carbohydrates, fiber, etc.) Lee et al. conclude that dietary adherence and diet quality is still low. Similarly, in the Public Health Service's survey of 458 people advised to limit salt intake, 74% of black and 41% of whites responded that they had been given a diet plan by their doctor (HHS, 1986).

Approximately 41% of my study participants report having received a diet plan (a list of recommended or not recommended foods or total meal plans) from a health professional, usually a nurse. While statistically insignificant, those with a low adherence level tend not to have received a diet plan. When I asked those who had received these diet plans whether they were still following them, the sole affirmative response came from one informant who has bi-monthly check-ups from a visiting nurse. With such constant monitoring, this participant's strict adherence to this diet plan comes as no surprise.

The most frequently stated reasons for "throwing away the diet plan" (as many people expressed it) includes overly limited choices, inappropriate foods ("strange things I never heard of," as one man said) and, to a more limited degree, lack of will power (only two people claimed they were unable to stick with a plan for this reason). Inappropriate foods include those unfamiliar to the study sample, such as many "light" products, bagels, no-stick fat sprays and certain fruits like kiwis. In addition, costly foods like melons, the white meat of chicken and turkey, and whole grain breads may present financial challenges. Most participants said they had returned to preparing and consuming things with which they are familiar, using common sense or "mother wit" to conform to reduced salt and fat recommendations. In addition, most participants rejected or ignored the diet plan's serving sizes and did not see the need for measuring or weighing food portions, as several dieticians instructed them to do.[21]

Health professionals, however, should not feel discouraged or believe that their patients reject all dietary counseling. Despite the fact that only one informant uses a diet plan, most people in my study seem to recall some of the basic dietary messages and 70% responded affirmatively to the question, "Has a health care practitioner changed the way you eat?"

Though statistically insignificant, a pattern emerges that links high adherence with the perception that the doctor or nurse has influenced food preparation style. Fifty-three percent of low, 63% of medium, and 87% of high adherence groups, respectively, reported that health professionals have changed the way they cook. Specifically, most informants report that doctors and nurses have raised their awareness of the dangers associated with eating overly salty and fatty foods and using too much salt and frying. This should indicate to health professionals the importance of their patient consultations.

Other Factors Influential in Dietary Selection

As Harris discusses in Good to Eat (1985), his materialist-driven explanation of food selection, consumption choices are driven by ecological considerations such as crop availability. In our society, economic accessibility may also determine food selection. As numerous researchers have pointed out, the lowest earners in our society tend to have the least adequate diets and to suffer from obesity and undernutrition (Lieberman, 1988a). Wagner's study of African-American elderly from Miami found that economic constraints coupled with physical disability greatly compromised food variety and quality. Fully one-third of that study sample's income was spent on food. In addition, due to physical incapacitation and expense, most of her study participants went shopping fewer than two times per month. Consequently, consumption of perishable items was minimal; only 17% of her sample consumed fresh vegetables and only 30% ate citrus fruit, though this study site was in close proximity to abundant citrus supplies (as cited in Jerome, 1988).

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[21] Very few (5) of the study participants report consulting a dietician.

The rural location of my study presents many of my informants with similar obstacles to procuring a wide range of food. With only one supermarket serving a six mile radius and no local buses or senior citizen vehicles, those without regular transportation shop infrequently, often only once a month. Women, particularly those living alone, are most likely to have no means of transportation. They must rely on someone "to carry" them to the supermarket and are often charged a what to a low income group constitutes a high price (although the market is only a few miles from most homes). Half of Nicken's study sample in a similar community relied on someone else for transportation. Most of her study participants either were transported by friends (15%), family (30%), or the Older American's Council van (19%) (1984). Though well-intentioned, surplus food distribution usually fails to address the rural elderly's problem of transporting the food to their homes.

Another obstacle possibly preventing more wholesome food choices concerns the food items' cost and availability at local supermarkets in low income areas. A headline from the Wall Street Journal on inner city food availability reveals this problem of product access; "An Inner City Shopper Seeking Healthy Food Finds Scant Offerings: Cupcakes but no Skim Milk." In this article, marketing experts claiming non-discrimination, justify their exclusion of higher quality foods by saying, "In business you go where the consumers are" (1991). Furthermore, a Cornell University Cooperative Extension service study found low fat milk available in only 25 of 149 small grocery stores in the impoverished Bedford Stuyvestant section of Brooklyn. The article also reports that the "healthier" products, when available, are likely to cost more. For example, a can of Campbell's Special Request soup (lower in salt) costs 59 cents, while a generic can costs 45 cents (WSJ, 1991).

These "scant offerings" in the above mentioned article do not appear to constitute a problem for my study sample. Though 93% of my participants generally patronize the only supermarket in town, it offers a good selection of fresh fruits and vegetables at reasonable prices. Furthermore, it offers a quarter of a row for predominantly low calorie, low fat, and low salt products. These items tend to be significantly costlier than their "regular" products, but this is fairly consistent with other supermarkets. For those who cannot make trips to the local grocery store, however, "convenience" stores charge much higher prices and have a more limited selection, particularly of items recommended for a low salt and low fat diet. Other sources of foods for my sample include gardens (cultivated by seven households, or 17% of my sample); neighbors or friends who bring food by informants' homes (three individuals); and "the fish man" who travels door-to-door selling fresh mullet, bream, and other local fish (five informants, or 12% of participants, note they regularly purchase his fish).

Finally, while 80%, or 33 participants have been instructed to take anti-hypertensive medication, no one in the study expressed that such pharmacological interventions could replace dietary modification. Unlike our study on diabetic control in which insulin or other medications were viewed as mitigating the effects of sugar consumption, my study sample showed no tendency to "counteract" the fat or salt consumed by using diuretics, beta blockers, or other antihypertensive agents. Thus, it is unlikely that medication use plays any role in my study participants' food selection strategies.

Obesity

Obesity, defined as an excessive accumulation of body fat (20% greater than recommended for males, 28% for females), is a major risk factor for hypertension, cardiovascular and other serious diseases, as well as for premature mortality (Lieberman, 1988a). Among those over 65 years of age, 39% of black women (compared to 19% of white women) and 19% of black men (compared to 11% of white men) are considered obese (Lieberman, 1988a). Dietary intake is implicated as a major contributor to obesity since excessive caloric intake (energy) is stored as fat; however as Figure 3-1 illustrates, there is a "surprising relationship" within the African-American population (Lieberman, 1988). While black women are more likely to be obese than other population groups, their self-reports indicate the lowest caloric intake by ethnicity and gender (Jerome, 1988; Lieberman, 1988a). For example, one-third of African-American women age 65-74 reportedly consume below the recommended daily allowance for calories, though 61% are considered overweight (Lieberman, 1988b).

This seemingly contradictory finding necessitates consideration of other factors such as inappropriate or inaccurate data collection (including poor quality self-reports possibly due to faulty recall or cognitive impairments) [Dr. M. Doughterty, 1994, personal communication]) or heredity and genetic composition (a "thrifty genotype," may have been beneficial in a population that underwent inadequate food reserves, but in our present society of food abundance, such an efficient system may protectively store away too much energy).[22]

Another consideration for this discrepancy may involve measurement issues. While most assessments of obesity involve simple height and weight comparisons, such measurements render, for example, a large framed person indistinguishable from someone with extensive amounts of body fat (Gray and Bray, 1991). Table 3-9 and 3-10 suggest that different conclusions might be drawn about adiposity depending on the instrument used for measurement. Table 3-9 shows that older black and Mexican-American women are almost twice as likely as white women to be overweight, but as Table 3-10 indicates, body mass index (BMI, expressed as wt (kg)/ht (m)$_2$) rates do not vary as extensively among whites, black, and Mexican-American women (Schick and Schick, 1994). The BMI has been proposed as a measure for overweight since it more accurately reflects the extent of adiposity than single weight for height

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[22] Neel (1982) and Lieberman (1988a) note that those groups with the highest rates of obesity and non-insulin dependent diabetes (American-Indians, Hispanics, and African-Americans) have historically contended with the "feast or famine" phenomenon that, over the generations proved advantageous in assuring survival. Not only do these populations generally enjoy stable and plentiful food supplies, but in conjunction with the diminished activity level typical of a non-industrial society, such genetic thriftiness has become disadvantageous.

(Gray and Bray, 1991). Health professionals should, therefore, rethink the assumption that obesity and overweight results solely from over consumption relative to activity patterns and inability to maintain a recommended diet.

Table 3-9: Percent of overweight females, 65-74 years of age by age and ethnicity, 1976-84.

Age	non Hispanic white	non Hispanic black	Mexican American
65-69	35.6	61.4	59.9
70-74	34.9	54.0	43.0

Source: Schick & Schick, 1994.

Table 3-10: Mean body mass index (in kg/m^2) for females, 65-74 years of age by age and ethnicity; 1976-80 and 1982-84.

Age	non Hispanic white	non Hispanic black	Mexican American
65-69	25.7	28	28.3
70-74	25.8	27.6	26.8

Source: Schick & Schick, 1994.

Table 3-11: Mean body mass index (in kg/m^2) for males, 65-74 years of age, by age, race, and ethnicity, 1976-80 and 1983-84.

Age	non Hispanic white	non Hispanic black	Mexican American
65-69	25.7	24.0	26.2
70-74	25.2	25.2	25.2

Source: Schick & Schick, 1994.

Table 3-11 shows that black males have lower BMIs in the younger elderly group and identical BMIs for the older elderly group compared to whites and Hispanics.

Body Image

Aside from rules designating particular foods desirable or undesirable, ones culture also dictates how much should be eaten and how much body weight should be maintained. The dominant culture in the United States insists on what many researchers consider an unrealistically slender body image, particularly among women. Allan (1989) found that people react to these unrealistic expectations either by developing individual weight goals or "explanatory models" inconsistent with such body images. Many investigators believe that African-Americans appreciate heavier body types and attribute this image with promoting obesity and thwarting weight loss attempts (Allen, 1989; Kumanyika and Ewart, 1989; Kumanyika et al., 1993). Furthermore, a greater proportion of black women than white responded affirmatively to the statement, "Some people are born to be fat and some thin; there is not much you can do to change this." Fifty-one percent and 29% of the black women agreed or strongly agreed, respectively while only 40% and 12% of the white women similarly agreed and strongly agreed (Schick and Schick, 1994).

While confirming some of these perspectives on weight distinct from the cultural mainstream, my study sample does not idealize or even accept obesity as a norm. Contrary to Allan's (1989) conclusion that African-Americans do not consider obesity to constitute a health hazard,[23] many of my informants believe that excessive weight and weight gain is harmful both for health reasons, and it causes one to feel uncomfortable, particularly in the summer. (Most people in my study do not have air conditioners in a climate with high humidity and temperatures for much of the year). Like Kumanyika et al. (1993) found in the study of younger (25-64 year old) women, my study sample is aware of the health risks and irritating side effects associated with obesity. In addition, I frequently encountered critical comments about "Sister X or Brother X at church dinners just eating and eating and all that rich food doing him or her no good." As an 84 year old woman explained, "some of everything can go wrong when you're too fat."

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[23] According to Allan (1989) and others, obesity, like high blood pressure, is not perceived as a disease by African-Americans .

One 66 year old informant with a low adherence score, illustrates two themes echoed throughout my discussions of weight; the annoying nature of carrying too much weight and the notion of a "preordained" weight. First, describing herself as "just getting bigger and bigger," she mentions "It (the weight) just seems to go against me. Look like it makes me more tired and sweat more. I can't seem to do what I used to do and that frustrates me."

This same informant voiced the familiar perception that her "true weight is getting away" from her. When asked to explain, she essentially described herself as having a "preordained" base weight that cannot fluctuate more than ten or fifteen pounds without some sort of consequence. I have frequently heard people, those trying both to gain and lose weight, talk about "getting back to my normal self" or "normal weight."

Despite these concerns expressed about obesity, many participants exhibited a heightened perception of being underweight. Several of my participants who had sustained a major weight loss and yet seemed to be within normal limits of height for weight according to Metropolitan Life tables considered themselves weakened or too thin (1983). Two people (both women) in the study actually appeared underweight but those who fell in the "normal range group" tended to view themselves too slender. Again, this perception may be attributable to the notion of a baseline weight, above or below which can be injurious to ones well-being.

Concomitantly, major weight fluctuations are often seen as "unnatural" and "unhealthy" (two words actually used by my informants). Significant weight loss also seems to cause people problems, notably weakness and fatigue. Many of the elderly black females in the diabetes study with which I was involved reported that weight loss left them feeling weak and their "skin just hanging loose off their bodies." Similarly, one 65 year old woman in my study notes she has lost over one hundred pounds in the past five years, partly due to a kitchen accident that hospitalized her for several months and partly due to her husband's death. She complains of extensive fatigue that often precludes her from exercising as well as from preparing dinner. Her 92 year old live-in sister fills in when she is unable to cook. Perhaps the aging process or, in the case of this particular respondent, depression or debilitation from her accident, might be implicated in the fatigue rather than their weight loss.

Despite negative perspectives on major weight loss, the seriousness and prevalence of obesity in the study sample concerns all of my study participants' physicians since weight reduction appears to be inversely related to hypertension. Of the 41 members of my study, physicians directed 63% of the men and 68% of the women to lose weight. Physicians gave such directions when they felt that extra weight was contributing to a patient's hypertension or otherwise exacerbating a medical condition, such as diabetes. In the study sample, twenty-four people (almost 60%) were considered higher adherers to weight recommendations, while seventeen people, or 40% were considered lower adherers.[24] Aside from education, none of the sociodemographic variable (sex, age, household income, household composition, duration of treatment) was associated with adherence. Table 3-12 shows that greater educational achievement is correlated with greater adherence level for weight goals.

Table 3-12: Education by adherence to weight recommendations

Educational level	Adherence to weight recommendation	
	low	high
Primary school	41% (7)	---
Middle school	24% (4)	38% (9)
Secondary school	35% (6)	63% (15)

p=.01, n=41, chi square=8.09

It is interesting to contrast my study participants' perception of dramatic weight loss with that of the "diet gurus" who extol the virtues of weight loss as contributing to energy levels and making people feel years younger. Only one study participant expressed a similar perception.[25]

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[24] By reviewing weight charts and physician recommendations, I established a dichotomous adherence classification for weight. Participants are considered high adherers if they either lost weight (even a minimal amount, just as long as they were following their physician's advice to reduce) or if they did not significantly alter their acceptable weight. Informants are considered low adherers if they did not lose weight as directed or gained weight against the physician's advice. I usually reviewed weight charts over the past five to seven years.

[25] The one participant who seemed to be elated with her dramatic weight loss (75 pounds in the past two years) was an interesting and unusual "case". This seventy-four year old, had become very involved in a health club in one of the wealthier parts of University City. She would meet her forty year old daughter three times a week to "work out"(her term)-do aerobics, work on the weight machines, sit in the sauna and sometimes get a massage. Afterwards, they'd eat at Popeye's or Burger King. Still, she loved the experience, saying, "I cut a real interesting picture. Me and those pretty skinny little white girls in tight pants moving to that music."

Aside from this feel of fatigue or weakness, there may be other reasons why thinness is not so revered as it is among "mainstream" America. Given the African-American historical reality of food scarcity and "wasting illnesses," obesity was once considered healthy and fortunate (Kumanyika and Ewart, 1989).

Summary

While many researchers propose that African-Americans' failure to conform to recommended dietary standards may be attributed to a history of poor food choices, I contend that traditional philosophies of balance and moderation exert an equally persuasive force on dietary decision-making. My study sample is more likely than not to be adhering to a standard recommendation for weight control and fat intake, though salt use continues to be problematic.

My study sample is very aware of the discomforts and hazards associated with obesity, but unlike many Americans, most do not emphasize appearance as a desired goal of weight reduction. Fat consumption among my participants is not nearly as extensive as many surveys indicate it is for older African-Americans. Those most likely to follow fat recommendations include the more educated and those who live with others in a household. The study sample, however, almost unanimously lacks awareness of the health implications of excessive cholesterol consumption.

Salt consumption remains problematic, with almost three-quarters of my sample exceeding intake recommendations, probably due to extensive inclusion of sodium into processed foods. However, most of my participants feel concerned about their physician's recommendations and believe they actively pursue dietary modification strategies because they do not salt their food or have minimized dietary inclusion of such salty foods as pork. Despite people's awareness of harmful side effects of salt overconsumption, "fresh" or unsalted food is considered not tasty and undesirable.

Diet plans, given to approximately half of my study participants but only retained by one person, fail due to a lack of cultural appropriateness and because participants employ the philosophy of balance and moderation to creatively alter salt and fat use. Almost three-quarters of study participants report, however, that health care practitioners' recommendations of salt and fat reduction have been influential in altering their food habits.

Though many unresolved issues remain, such as the influence of economic scarcity on food selection, overall my data indicate a relatively good adherence level and food choice strategy. Since altering ones food intake and preparation style challenges customs and preferences, (often without any tangible benefits) choosing to modify dietary practices, particularly after a half century or more, is a testimony to human adaptability and cultural traditions that sanction such modifications.

CHAPTER 4
AFRICAN-AMERICAN HEALTH BELIEFS

The numerous studies undertaken over the last century on African-Americans' health beliefs depict a system based on natural and supernatural causation that uses a stunning variety of preventive and restorative procedures administered by a diverse set of healers. Illness etiologies are dichotomized into natural (which result from bodily imbalance or lack of cleanliness) and unnatural (due to acts of magic, witchcraft, or the Devil's work) (Foster, 1976; Snow, 1977, 1983; Watson, 1984).

Since many of these illness etiologies are inconsistent with conventional medical models, treatment approaches frequently lie outside of biomedicine. Natural illnesses may be self-treated through rebalancing diet and attending church, or they may require assistance from specialists like herbalists and root doctors. Unnatural illness are not amenable to biomedical, herbal or dietary treatment; they require the attention of conjurers and supernatural interventionists.

The Concept of "Traditional" Medicine

Some cross-cultural scholars investigating health beliefs recently have begun to reject both the term "traditional" and the characteristics associated with the term. Instead, many researchers prefer to employ what they perceive as a less judgmental term like "popular" (Dr. S. Feierman, personal communication, 1993). "Traditional," according to these scholars, connotes a lack of change or backwardness, unsuitable descriptors since cultures are always in flux and are increasingly involved in a global community. In addition, while many scholars retain the notion of a singular, immutable African-American cultural tradition, others are increasingly recognizing the influences of new institutions and interactions. The former group promotes this concept of a monolithic traditional black folk medicine because of African-Americans' historic marginalization and segregation. Such isolation is believed to have created a relatively culturally-determined and cohesive package of beliefs reinforced throughout the generations. While such a perspective may have been appropriate in times past, contemporary circumstances render these ideas problematic in at least two regards.

First, very few cultures, particularly those existing in the latter part of the twentieth century in one of the world's most industrialized nations, can remain unchanged from year to year, unaffected by "mainstream" beliefs. Thus, while Snow's accounts (1983, 1993) of black health beliefs and practices first investigated in the 1970s are excellent collections of folk constructs, some contemporary researchers have begun to question their generalizations and contemporary relevance (Watson, 1984; Randall-David, 1985; Hill, 1988). My ethnographic interviews reveal that certain practices have significantly decreased, such as conjuring and herb collecting, while others, like biomedicine, have become increasingly popular.

Secondly, researchers seeking one "big coherent system" of health beliefs and practices tend to ignore the diversity within that culture. With millions of African-Americans in the United States today, it is difficult to imagine that most agree on a uniform approach to anything, including health maintenance. "American blacks" include a diverse array of peoples (Bahamians, Haitians, Cubans, northerners and southerners) who may be exposed to very differing health perspectives and health care facilities

(Weidman, 1979). Snow herself has expressed the view that many southern blacks have more in common with their low income white neighbors than with blacks from different regions, socioeconomic levels, or national origins (1977).

Randall-David's (1985) study illustrates how new and significant changes in the mode of health knowledge transmission have altered many people's health beliefs. As people are becoming more integrated into "mainstream society" (through school, the workplace, activities, the mass media), and "mainstream medicine" (through increased contact with those in the medical community and better access to medical facilities through programs like Medicaid, Medicare and more inclusive workers' benefits), "mainstream" health orientations have replaced their knowledge of "traditional medicine." Thus, to more accurately conceptualize black popular medicine involves integrating not only humoral, Greek, and African influences, but also recognizing the contemporary homogenizing national medical culture.

Hypertension and High Blood Pressure

The majority of the studies that attribute nonadherence to "alternative" health belief models conclude that the disjuncture between the biomedical perspective and the "folk or lay" models causes mutual frustration; the physician cannot understand why a patient does not simply take the pills or otherwise follow treatment recommendations and the patient feels the doctor is not listening or does not understand his/her own particular case (Chubon, 1989; Snow, 1993).

In the case of hypertension, however, this disjuncture may be partially bridged, or possibly obscured, by the mutual acceptance of the terms "hypertension" and "high blood pressure." While biomedical practitioners and lay people understand and use these terms in very different manners, their common acceptance by each party promotes a "lingua franca" . As Blumhagen notes,

> Plain folk say Hyper-Tension, the experts say hypertension, and each thinks the other is talking about the same thing. The physician doesn't have to deal with the social stresses that don't fit into his model and the layman can reshape the physiological explanation of biomedicine to a more amenable form. Because of the distance that is affected by two disparate definitions, the therapeutic alliance is not threatened. (1980, p. 224)

From a biomedical perspective, hypertension and high blood pressure are identical conditions thought to be the disturbance of the ratio between cardiac output and the vascular system's total peripheral resistance (Lund-Johansen, 1983). Normally considered asymptomatic and detectable only by medical activities, such as blood pressure screenings, high blood pressure can lead to heart and kidney disease, strokes, blindness, and ultimately, death. The numerous and individualized hypertensive treatments may include pharmacological interventions to dilate vessels and decrease cardiac and blood volume as well as "lifestyle changes" involving weight reduction, dietary modification usually in terms of reduction of fat and sodium, increased exercise, weight loss and stress management.

While "plain folk" and health care practitioners alike may use the terms "high blood pressure" and "hypertension," these two groups may be worlds apart from each other in meaning. First, many people, blacks and others, believe that hypertension and high blood pressure are two distinct diseases with separate etiologies, prognoses, and treatments. The two diseases are often thought to occur simultaneously, but do not necessarily appear and disappear at the same time. Randall-David's (1985) study revealed that two-thirds of those over 60, 79% of whom were hypertensive, believe in the distinctiveness of hypertension and HBP. In another investigation, 53% of hospitalized black hypertensive women in New Orleans recognize the two terms as different ailments (Heurtin-Roberts and Reisin, 1992). Similarly, in Blumhagen's study of mostly white working and middle class people, 72% claimed that hypertension is distinct from high blood pressure, believing that the former is initiated by social stress (1980).

Secondly, the particular terms of "hyper-tension" and "high blood pressure" may themselves promote misunderstanding between laypeople and health care professionals (HCPs). These two terms connect the social experience to the illness, removing the Western tendency to create a mind-body dualism. As Blumhagen points out, if high blood pressure were called "Korotkoff's syndrome"[1] people would be less likely to express it as a psycho-social phenomenon (1980, p. 222). My research gives a more thorough examination to HBP than to hyper-tension since most study participants believe the former to be related to dietary intake and the latter controlled by a mental, stress-induced state. Thus when I, the "blood pressure lady" arrived at their homes, my informants primarily discussed what people ate rather than their worries.

Hyper-tension

Many lay people conceptualize "hyper-tension" as the physical reaction to a stress-related phenomenon (such as being upset over your children, money problems, etc.) brought on by overly active nerves or tenseness. It is believed that such excessive nervousness, anxiety, or tension can elicit this potentially debilitating condition that causes stress on the entire body, particularly on the circulatory system and specifically on the heart and the brain (Blumhagen, 1980; Heurtin-Roberts and Reisin, 1992). Some people are more prone to the condition due to heredity and/or physical fitness level, though since it is seen as a disease of the emotions, everyone can suffer from bouts of hyper-tension (Blumhagen, 1980). This perspective on hyper-tension's etiology is not limited to African-Americans; participants in the multiethnic Public Health Service's (PHS) survey mentioned nervousness or tenseness as the second most likely cause of hypertension, after being overweight (HHS, 1986). My informants indicate that hyper-tension cannot be treated, but rather must be managed because a person will always have "emotions" or "worryation"; consequently, this disease is less predictable and possibly more dangerous than "high blood." Unlike HBP, however, which most people in my study believe is a life-long disease, hyper-tension can come and go quickly.

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[1] After the scientist who first described the sounds used to measure blood pressure.

Heurtin-Roberts and Reisin and others have described African-American perspectives on the course of the disease as follows: the blood, usually resting and circulating slowly, is activated by intense emotions or stress, causing it to shoot up rapidly into the head and then fall back down quickly. The blood continues to rise and fall more quickly than usual; thus, it has the potential to cause extensive damage and even sudden death (1992).

Treatment

Since hyper-tension is a disease stemming from the nerves but not "all in one's head" (because it contains a very physiologic component and manifestation), many African-Americans believe nerve pills or tranquilizers have only limited utility (Blumhagen, 1980, p. 211). Similarly, altering ones diet or taking different medications are not considered effective approaches to controlling hyper-tension. Consistent with my study sample, hospitalized black diabetics in New Orleans suggested that the best way to overcome hyper-tension is to more permanently, "avoid worry and to relax, rest, stay quiet, and get away from people"[2](Heurtin-Roberts and Reisin, 1992, p. 789). Many of my study participants report that reading the Bible, going to church, and praying works effectively.

High Blood Pressure

Etiology

High blood pressure (HBP) is understood by many African-Americans as a disease in which the blood--its volume, temperature, viscosity, richness, thickness, etc.--malfunctions. As Snow writes, "the blood itself has for some reason moved higher than the safe middle level in volume and or location in a continuum where both extremes are seen as abnormal." (1993, p. 117) Both hypertension and high blood pressure work on a "thermometer model," wherein when blood problems occur, the blood tends to shoot straight upwards toward the head. The blood may remain there, possibly for months and may ultimately cause a stroke or heart attack.

As Table 4-1 illustrates, most of my study participants believe a wide range of factors may be responsible for high blood pressure. As Snow reports and my study confirms, however, the main culprit in high blood pressure is believed to be"dietary folly" (1993, p. 125). A diet that includes too much pork, salt, grease (fat), and seasonings is thought to increase the blood's richness and thickness eventually impeding healthy circulation (Heurtin-Roberts and Reisin, 1990). Like Snow's informants who said, "We just eatin' our disease and drinkin' it" two of my participants noted, "My problem with my pressure comes from my high risk diet" and "I am doin' myself in by eatin' like I do."

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[2] The theme of others having an adverse effect on ones health was echoed throughout my study. "I love them to death", says one 74 year old woman about her relatives, "but that's just what it is-they sometimes seem to be killin' me with worry." Statements like this add to the credibility of social support instruments like the one created by Tilden et al. (1991). Such an instrument factors in both a negative and positive side of social support. (See Chapter 5 on social support.)

Table 4-1 denotes the importance of God in health and illness. God does not directly cause illness and restore wellness; however, since He (as all of my participants refer to God) controls of all the world, God is indirectly responsible for health status. While God is seen as good and as one who does not punish people by elevating their blood pressure, most informants conveyed a certain amount of inevitability surrounding sickness. As one older woman told me, "When Adam and Eve made that first sin, God said there will always be sickness and death around."

Table 4-1: Etiology of HBP: Responses to "What do you think might cause or contribute to HBP?" by biomedical or folk orientation.[3]

Cause	Biomedical Orientation		
	yes	no	do not know
salt	98%	--	2%
overweight	95%	5%	--
fat	93%	2%	5%
heredity	68%	8%	24%
no exercise	66%	22%	12%
smoking	61%	15%	24%
being black	56%	10%	34%
old age	32%	66%	2%

n=41

Cause	Folk Orientation		
	yes	no	don't know
too much alcohol	81%	7%	12%
God's will	46%	49%	5%
God's punishment for sins	22%	73%	5%
too much water in system	15%	65%	20%
evil spirits	15%	78%	7%
roots, hexes. or magic	5%	88%	7%

n=41

Most informants explained that humans are the tools through which God works, both in causing and in curing diseases. It is not necessarily God's will that anyone is sick and suffers; one brings it on oneself. Nor does God directly cure all disease; rather, He uses the doctor as a tool and the ill person is expected to adopt a loosely constructed sick role to restore or maintain health. Thus, according to most of my informants, God's main role in sickness and health, is to try to give individuals and their health care practitioners the strength and will to restore and maintain health. While almost all of the study participants concurred with this general explanation, there are a few people who offer alternative perspectives, usually attributing more power either to God/fate or to humans.

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[3] I derived the designations "biomedical" and "folk" according to Kleinman (1980), Randall-David (1985) and by reading the biomedical literature. While there are some disagreements about etiologies and treatments of HBP within the medical community, the literature generally concurs with these most basic distinctions

It should be noted that the HBP etiologies listed in Table 4-1 are not unique to my study sample. Bailey (1991) found that both blacks and whites believe improper food choices were the primary contributors to high blood pressure, as did Randall-David (1985). Fifty-three percent of her study participants believe hypertension may be caused by fatty foods, 40% said eating too much salt, and 16% "eating what you have no business eating" or not eating right (1985). Bailey's black and white respondents similarly tended to believe high blood pressure was caused by activities that people had control over, like food and alcohol consumption, cigarette smoking, being overweight and stress (Bailey, 1991) Also implicated were age and heredity. 53% of blacks and 65% of whites believed age, and 60% of blacks and 91% of whites noted heredity contributes to high blood pressure (1991).

Symptoms

Contrary to conventional biomedical wisdom indicating otherwise, most lay people believe HBP can be accompanied by a number of warning signs as well as being asymptomatic. In the Public Health Service's survey of beliefs about high blood pressure, nearly three-quarters of blacks (72%) and over half (58%) of whites listed symptoms that can signal elevated blood pressure(H.H.S., 1986). The survey found that hypertensives share this belief to the same extent as normotensives (an average of 60%). As Table 4-2 illustrates, my study participants listed numerous symptoms they felt may accompany high blood pressure. Everyone listed at least three potential signs of high blood pressure, with a mean of seven signs. There is no statistical relationship between number of symptoms of HBP each respondent listed and adherence level.

Table 4-2 : Percent of those responding affirmatively to suggested signs of HBP.

Sign	yes	no	don't know
feeling faint	95%	2%	2%
headache	95%	5%	--
"swimmy" head	88%	5%	7%
nervousness	63%	19%	17%
pounding heart	61%	17%	22%
sweating	61%	20%	19%
racing pulse	54%	19%	27%
ringing in ears	46%	27%	27%
nosebleed	46%	29%	24%
emotional outbursts	37%	46%	17%

n=41

When study participants were asked what problems they felt are associated with HBP, many responded the aforementioned symptoms annoyed them. Thirty-two percent, 17%, 12% and 7% mentioned being bothered by fatigue, dizziness/faintness, headaches, and vision problems, respectively. Less problematic were shortwindedness, a feeling of drunkenness and nervousness, cited by 5%, 5%, and 2%, respectively.

Despite numerous public advertising campaigns touting HBP as "the silent killer," less than half (44%) of my study sample believed that HBP can be asymptomatic. Every study participant, including those who believe that

HBP can be asymptomatic, listed various symptoms that may accompany HBP. There is no statistical association between the belief that HBP is asymptomatic and higher adherence levels.

Chronicity

Many scholars contend that African-American health beliefs do not include the concept of chronicity (Dougherty, 1978; Hill, 1988). Disbelief in chronicity has several implications; first, the individual is likely to ignore conditions that have no detectable symptoms. Second, only if the symptoms reoccur and are recognized by that person will she or he seek further help. Finally and most relevant for this study, lack of chronicity limits the importance of following a prescribed treatment. Why continue to deny yourself foods you enjoy or take expensive medication if you are feeling fine?

Most of my study participants show a definite awareness of HBP's chronicity and its accompanying challenges. When asked, "How long do you think your HBP will last?," 68% (28) responded "forever"/ "always," 20% (8) indicated "less than forever," and 10% (4) people were not certain. It is important to note that most of those who believe that their HBP will disappear in a prescribed period subsequently mentioned a self-determined treatment strategy. For example, several participants either said, "I'll get rid of my pressure problems when I lose this weight" or "If I cut down on that rich food, I wouldn't have this high blood." Many of those who believe their HBP "will last forever" accompanied their opinion with a statement like, "It'll stay with me until I'm dead" or "I'll always have it because things don't seem to work well in my system," or they blamed themselves for not following treatment recommendations.

Treatment

Table 4-3 illustrates my study sample's belief in the dual efficacy of mainstream medical treatment and popular treatments like home remedies and religious healing. The most frequently mentioned means of controlling high blood pressure include following: the doctor's treatment recommendations for medication and avoiding certain foods (unanimous agreement), followed by losing weight, praying, reading the Bible, taking home remedies, eating certain foods and exercising. While most informants agree on the efficacy of biomedical controls, there is a significant difference of opinion regarding folk oriented HBP treatment.

Table 4-3: Stated methods of controlling HBP by biomedical or folk orientation

Biomedical orientation

Control measure	Response (%) yes	no	don't know
avoid certain foods	100%	---	---
taking the medication prescribed by your doctor	100%	---	---
losing weight	98%	---	2%
eat certain foods	78%	17%	5%
getting exercise	76%	22%	2%
taking OTC medication[4]	49%	27%	24%

n=41

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[4] This refers to taking over the counter medication recommended by the doctor, such as aspirin for HBP.

Folk Orientation

Control measure	Response (%)		
	yes	no	do not know
pray	83%	17%	–
read the Bible	80%	20%	–
home remedies	80%	10%	10%
laying on hands	68%	20%	12%
taking herbs	51%	34%	15%
wearing certain objects	17%	83%	–
using certain lotions	17%	83%	–

n=41

Unlike the relatively similar perspective on HBP's etiologies and symptoms cross-culturally, treatment approaches appear to vary according to ethnicity. Even controlling for socioeconomic status, non-whites tend to use more nonbiomedical treatments or home remedies. In Bailey's study, for example, 41% of middle class blacks· compared to only 14% of middle-class whites claimed they use folk or home remedies to control their HBP. Black men are six times more likely than white men to use a folk care regimen, while black women are three times more likely than white women to do the same (1991).

My study reveals some interesting findings concerning home remedy use among blacks. In addition to modifying one's diet and taking medicine as prescribed by the doctor, 49% (n=20) mentioned home remedies they have used or currently use to control HBP. However, many more (78% or 32 individuals) believed some home remedies are efficacious in controlling HBp, but they did not use them. This gap between belief in and use of remedies probably indicates widespread usage of prescribed medication, promoted by the physician's persuasive voice. It may also signify a declining knowledge of and accessibility to traditional medicinal substances. Of those study participants not taking home remedies, 57% believe they may be effective, 24% are unsure if such treatments are useful, and only 19% say they do not work.

Table 4-4 lists the eight home remedies for high blood pressure control most frequently recommended by my study participants. This list is not nearly as extensive as Randall-David's, compiled among a similar sample eight years prior to my study. In her study, 74% of those over 60 years of age collectively listed more than fifteen different remedies for high blood pressure (1985). Table 4-4 similarly reveals less extensive knowledge or use of home remedies than Snow's study. Eighty-two percent of Snow's sample used home remedies and 78% reported having used them within the past six months.

Compared to Randall-David's and Snow's studies, whose samples were similar to my study, home remedy use among my sample appears to be waning. As Tables 4-3 and 4-4 reveal, there are significant differences in the number of participants who know specific remedies exist (100%), claim they are useful (78-80%) and say they use them (51%). Again, the gaps between knowledge of, belief in, and use of home remedies may be indicative of greater interaction between folk medicine and biomedical medicine, the latter of which is more highly visible and relatively more accessible.

Table 4-4: HBP home remedies, percentage of participants who have tried them or continue to use them, and their preparation/use.

HBP home remedy	%(n) who have tried/continue to use	preparation or use most frequently cited
vinegar	59%(24)	Taken with honey; to soak up fat or richness
herbs	54%(22)	Many people noted herbs are helpful, but most unable to mention those useful for HBP
lemon juice	42%(17)	Mix with water; drink daily to thin blood
garlic	32%(13)	Take a tablet /crush own a few times daily
herb teas	20%(8)	Elderberry, sassafras, mistletoe, Spanish moss
cola & lemon	7%(3)	Squeeze several lemons into coca cola and sip
Epsom salt	7%(3)	Mentioned, but no one knew how to use it
aloe	5%(2)	Use as a tea, mentioned frequently to aid arthritis, but rarely for HBP.

n=41

Many of my informants mourned the passing of herbal and other botanical knowledge, though nearly all feel the doctor's substitutes are superior. One exception in my study is one woman who noted, "God put everything on earth for a reason and it's only out of ignorance that we don't use the natural substitute." This preference of " the natural substitute" over the doctor's medicines is a major theme in Snow's Walkin' Over Medicine; medicine, in the form of herbs and other natural substances are all around you, so close you might be stepping right on top of them and not even realize how useful these plants may be (1993). Snow found that many people prefer to rely on home remedies rather than doctors' advice, particularly because the doctor may be trying to undermine their health, or at least is minimally concerned with the black patient's well-being. Because many of Snow's informants felt physicians were likely to belittle such treatment, 80% of those who use home remedies failed to mention such use to their doctors (1993).

Snow's conclusion about the widespread preference for folk remedies, however, runs contrary to my study. Generally, my study participants either used home remedies in addition to the medication or tended not use them at all. As one of the younger (66 year old) women said, "My mother used all those old timey things, but then, she died from pressure troubles when she was 50. I take my medicine like the doctor says." Many of those who do find home remedies useful frequently take them to counteract deleterious substances. For example, knowing that "pork is against" them and believing that "it runs up the pressure," people will eat a piece of pork with vinegar "to tone down" the richness. Lemon and pickle juice are thought to work in much the same way. The honey that accompanies various treatments is not curative itself, but makes treatments more palatable.

Health Locus of Control

According to the Health Belief Model (HBM), motivation to follow the physician's recommendations is enhanced if an individual perceives an illness to be threatening, the recommended treatment to be beneficial, and his/her participation in the treatment feasible, desirable, and efficacious (Rosenstock, 1974). This lattermost condition, conceptualized as "locus of control," is defined by Bush as the degree people believe themselves capable of directing their own destiny (1988). Those with a strong internal health locus of control believe in self-determation regarding their own health outcome, while those holding external control beliefs feel incapable of influencing their health status due to the powerful intervention of outside forces (such as luck, fortune, God, or, what much of the literature describes as "powerful others"). Many researchers have recently begun to include health locus of control (HLOC) as a health belief variable because it theoretically reveals the patient's understanding of the source of health maintenance and restoration.

Many studies positively correlate internal locus of control with greater level of treatment adherence (Wallston et al., 1976; Richardson, 1984; Schlenk and Hart, 1984; Meichenbaum and Turk, 1987; Heiby et al., 1989). Buckelew et al. (1990) discovered that chronic pain patients with an internal locus of control (greater than 3.5, where 1 is external LOC and 5 is internal LOC) were more likely to pursue the information seeking and self-management techniques recommended by their health care professionals. Speake et al. also concluded that those with a greater internal locus of control are more likely to engage in a "healthy lifestyle," meaning proper nutrition, exercise, stress management, self-actualization, health responsibility and interpersonal support (1989).

A number of studies similarly associate an external HLOC with nonadherence and poor health outcomes (Haynes, Taylor, and Sackett, 1979). Sherbourne (1992) found that patients who practice avoidance coping, such as those who hoped for a miracle or overate, drank, or smoked in hopes of alleviating their illness were less inclined to follow their physician's recommendations. Connell et al. (1988) positively associate lower adherence levels with greater patient dependency and the perception that treatment encroaches on social roles. Sackett and Snow found that those who believed that drastic lifestyle change does not guarantee health restoration also generally fail to follow treatment recommendations (1979). Similarly, the study conducted by Kiley et al. concluded that those with unsuccessful kidney transplants were more likely to perceive fewer treatment regimen benefits than those with successful transplants (1993). They discovered that a high external LOC (less than 2.5 on a scale where 1 is external and 5 is internal) was significantly correlated with more missed clibnic visits, greater weight gain, and nonadherence to medication recommendations.

Other research has either failed to positively correlate internal HLOC with following treatment recommendations and engaging in healthy behaviors or has actually disproved this association (Wallhagen et al., 1994). Wallhagen et al. discovered that while their sample had a high internal LOC (a mean of 5.1 on a scale from 1 [external] to 8 [internal]), there was no statistical significance between baseline functioning, health behavior, and LOC. Schank and Lawrence's study of 76 young women, half of whom were nursing students with a significantly higher internal locus of control than other participants, displayed no greater likelihood of adopting healthy lifestyle behaviors including the use of seat belts, infrequent consumption of "junk food," alcohol, and drugs and sufficient hours of sleep per night, than those with varying locus of control orientation (1993).

Similarly, Harris et al. (1987) discovered that internal LOC in dental behaviors is not necessarily associated with either greater dental knowledge or beneficial care practices. In their study, a moderately high level of internal LOC (the mean equalled 3.34 on a scale of 1 [highly external] to 5 [highly internal]) was not significantly correlated with dental knowledge, sopurces of dental information, or dental care behavior. Oldridge and Streiner also found no difference in the HLOC orientation among those labeled "compliers" or "drop outs" in a cardiac rehabilitation program (1990). Other studies that find no correlation between HLOC and health behavior include the study by West et al. (1993) on adolescents' adherence to dental appointments, Caggiula and Watson's (1992) work on adherence to cholesterol-lowering diets, and the investigation by Schapira et al. (1991) on dietary intervention among cancer patients. Furthermore, Wallhagen et al. propose that an internal HLOC may actually undermine adherence to treatment recommendations because those who feel in control of their health destinies may be less inclined to follow the recommendations of others (1994). We can conclude, then, that HLOC's impact on adherence level or participation in "healthy behaviors" is not yet completely determined.

Of the few researchers who have tested HLOC among African-Americans, most indicate that this sample has a high external locus of control and assume that they are less likely to follow treatment recommendations than other groups. Some scholars have posited that blacks' external locus of control has served to mediate stress, placing the failure to achieve good health and "the good life" outside of ones control (Neighbors and Lumkin, 1990). Such researchers conclude that the oppressive forces of institutional and personal racism preclude African-Americans from believing that they are in control of their lives and destinies, including their health.

My own research, however, offers a very different perspective. As previously mentioned and as Table 4-3 illustrates, most study participants believe that hypertension's cause can be controlled by their own activities. For example, avoiding certain foods and taking the medicine the doctor prescribes were the most commonly cited control mechanisms while wearing certain things and using certain lotions, both passive and less direct, were only recommended by a few informants. These findings are consistent with Randall-David's work (1985). With the exception of genes/heredity and being black, most informants believe that variables over which they have little control do not affect their blood pressure. (Over half of my study sample believe ones genetic composition contributes to HBP). In addition, my sample disproves researchers' ideas that African-Americans have a highly external HLOC. In fact, with a mean score of 3.44 (s.d.=.8) on a scale between 1 (internally oriented LOC) and 6 (externally oriented LOC), my study participants collectively display a moderate/external HLOC. Externality was bolstered by nearly unanimous agreement on the statement, "There are so many strange diseases out there, you never know what you'll catch" bringing AIDS to mind for many participants. Internality was most strongly in evidence by significant agreement on the statement, "I am responsible for my own health."

Third, as my data results indicate and some of the above mentioned studies note, HLOC may have little correlation with level of treatment adherence. While those with a low adherence level tend to have external loci of control, there is no consistent pattern for middle-range and high adherers (p=0.10).

Health "Knowledge" and Adherence [5]

Researchers' attempts to correlate "traditional" or "folk" health beliefs and nonadherence makes sense: If a physician prescribes anti-hypertensive medication to a patient, but that patient believes she or he need only relax and stop the "worryation" to get over this "bout of hyper-tension," then following the physician's medication recommendation would be inconsistent with his or her health beliefs. Conversely, with a clear understanding of and belief in the risks associated with a disease and the benefits of its treatment, an individual seems more likely to pursue the recommended treatment strategy.

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[5] Most scholars consider "knowledge" as a biomedical understanding of physiology, while "health beliefs" is reserved for non-western health models, although there is, to varying degrees, an overlap. Since I am basing my definition of adherence on the biomedical model, I will similarly use these terms, though I recognize the bias inherent in their use.

Despite the logical association between adherence and a biomedical orientation of disease, contradictions remain in the literature over whether a patient's biomedical understanding of a disease results in enhanced adherence (Haynes, Taylor, and Sackett, 1979). Some studies positively associate knowledge and adherence (Hulka et al., 1976, as cited in Stone, 1979; Heiby et al., 1989). If information is not given, as Harris and Linn discovered when one-quarter of their African-American diabetic sample indicated they had not been given any dietary information, adherence decreases (1985).

Heurtin-Roberts and Reisin similarly discovered a correlation between nonadherence and the belief that high blood pressure and hypertension comprise separate illnesses (1992). Out of 31 patients who failed to take their medication as prescribed, 65% believed the illnesses were different and 19% believed they were the same. Of the more adherent ones, 41% considered the illness to be distinct and 55% thought they were the same. Those individuals who suffered from "hyper-tension" were much more likely to be nonadherent than those with "high blood," possibly due to low perceived efficacy of dietary and/or pharmacological interventions. The authors conclude that 34% of the error in predicting adherence can be accounted for by the individual's explanatory model of HBP (1992).

Although interesting, these studies fail to quantify how much information is needed to enhance adherence. Is information in the broadest and most general sense, as in an entire explanatory model, sufficient to bolster adherence levels? Or, does an individual need to be informed on the details of the cardio-vascular system? Table 4-5 indicates that in my study there is no statistical significance between the Public Health Service's HBP knowledge questionnaire and adherence level,[6] though there seems to be a tendency for higher scorers to fall into a higher adherence group and lower scorers likewise to be lower adherers.

Table 4-5: Adherence level by PHS hypertension questionnaire results

Adherence level	PHS questionnaire results high	medium	low
high	58%(7)	31%(4)	25%(4)
medium	17%(2)	46%(6)	19%(3)
low	25%(3)	23%(3)	56%(9)
Total	100%(12)	100%(13)	100%(16)

p=0.19, n=41, gamma=.257

There is also a tendency for correlations between higher scoring and shorter treatment duration, being younger, and personally knowing a health care professional. Approximately two-thirds of those under treatment for 2-5 and 6-10 years achieved a high score, while nearly two-thirds of those undergoing treatment 11-20 and over 20 years received medium and low scores, respectively. Age may account for the positive relationship between briefer treatment duration and higher PHS score. Younger participants (who tend to have a shorter treatment duration) are likely to score higher on the questionnaire than their older counterparts. For instance, 75% of the younger and only 25% of the older group received a high score on the PHS questionnaire.

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[6] This knowledge was tested by using the Public Health Service's questionnaire (H.H.S., 1986) which included questions on causes and treatment of hypertension, among other issues. Informants were asked fifteen questions. Correct number of responses ranged from two to thirteen, with a mean of eight. Converting these scores to ordinal level data is as follows; low=seven and under; medium=eight and nine; high=over nine.

Finally, a strong positive correlation exists between personally knowing a health care practitioner (HCP) and PHS score. While those who know a HCP are evenly represented across scoring categories, two-thirds of those without personal knowledge of a HCP fall into the low scoring group. There is no statistically valid association between PHS score and gender or educational attainment, though those with less education tend to be overly represented in the lower scoring groups. Finally, there is no correlation between a more specific and esoteric aspect of hypertension knowledge, the numerical definition of HBP, and adherence level among my sample. When asked about the numerical definition of high blood pressure (generally thought of as at least140 mm Hg systolic over 90 mm Hg diastolic), only 5% (n=2) of my sample responded correctly.

In summary, from my study and others' research (Kirscht and Rosenstock, 1977; Gerber and Nehemkis, 1986; Meichenbaum and Turk, 1987; Heiby et al., 1989), it is apparent that while knowledge of a disease threat precedes adherence, knowledge of the disease alone is insufficient as an adherence motivator. There is undoubtedly a better level of treatment adherence when an individual understands the basics of the disease threat and the recommended treatment regimen, but my data do not reveal a direct correlation between extensive HBP knowledge and enhanced adherence.

Information Sources

Although cultural differences and regionalisms undoubtedly still exist, biomedical information is increasingly available via the mass media, friends and relatives employed in the medical industry, and due to improved access to health care facilities. While it is difficult to determine the precise sources of people's health information, a general understanding of the basis of such information pinpoints influences.

Media

The Wall Street Journal reports that African-Americans watch an average of seventy-four hours of television weekly, or 44% more than whites (1991). With such extensive exposure to television, one would speculate that the media constitutes a major information source for blacks. My sample, however, is not influenced by the television as much as the WSJ indicates for several reasons. First, my sample watches an average of four and a half hours of television daily, less than half of the average reported in the Wall Street Journal. Secondly, though many study participants frequently had their televisions on during the day, few actually sat and watched the programs. Rather, many participants explain that they appreciate the company a television provides rather than actually listening or watching for substance or content. The "background noise" character may also partially explain why television has little influence in my sample's self-reported source of health information.[7]

Television also has a limited impact on my sample's health knowledge because, as many note, they seldom hear broadcasts on medical reports. Forty-six percent (n=19) of study participants estimate that they hear health reports less than once per month. It is interesting to note, however, that this reported frequency of television-generated health information is far greater than among Randall-David's sample. In her study, only 11% of older respondents reported hearing medical/nutritional information on the television (the most frequently viewed information medium) each month. It is possible that during the intervening eight years since Randall-David's study, there are more health programs available to viewers.

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[7] The Wall Street Journal's report on health information, the media, and African Americans notes that 15-20% of fast food restaurants' advertisements are targeted at minorities. In the first half of 1990, McDonald's, for instance, was one of the top advertisers on such "black oriented" television shows as "the Cosby Show" and "A different World". One can speculate if advertising levels remain the same and more predominantly black television shows currently, the black viewing audience that might be influenced by such commercials may also increase proportionately (1991).

It is also interesting that as my sample watches more health programs on the television, they read less health information in the written media than Randall-David's study. As Table 4-8 illustrates, and Randall-David's study concurs, many older blacks do not garner much health information from radio, newspaper, or other printed media. In Randall-David's study, most responded they never hear about health on the radio (63%), newspaper (53%) or in magazines (89%). My respondents report listening to health information the radio, reading about it in magazines and in the newspaper even less than Randall-David's sample; 83%, 63%, and 78% seldom or never receive health information from radio, newspapers, or magazines, respectively. In sum, while health news may be increasingly available on the television, few people in my study acquire much information from media as a whole. Its major role may be to reinforce information already acquired.

Social Contacts

Most research on older African-Americans contends that "through the grapevine" or "hearsay" information from fellow church members, family, and friends comprises a significant portion of health information (Martin and Martin, 1985; Chubon, 1989; Caggiula and Watson, 1992). "Hearsay" is often thought of as cultural translation, or information that places the outside world into a local context. Most health researchers worry that such information frequently contradicts health care practitioner's information and undermines adherence (Adair et al., 1989).

However, as Randall-David's dissertation (1985) and my own demonstrate, the content of contemporary "hearsay" appears to include a greater degree of biomedical orientation than previously believed. One major factor in this information transformation is the increasing participation of African-Americans in biomedical professions. With about three-quarters of both Randall-David's sample and my own having a friend or relative in the health-related professions, biomedical beliefs are reinforced on a personal level (1985). As Table 4-6 indicates, those who enjoy personal relations with health professionals also tend to have higher adherence scores.

Table 4-6: Percentages of those with relatives or close friends in the health care professions by adherence score

	Adherence Score			
	low	medium	high	Total
know HCP	15%(6)	24%(10)	34%(14)	73%(30)
do not know HCP	22%(9)	2%(1)	2%(1)	27%(11)

p=.001, n=41, chi square=13.28

Health Care Practitioner (HCP):

Though Chapter 7 (on patient/practitioner relations) provides an in depth exploration of the impact of the HCP, and particularly the physician, on the patient, it is important to note that most study participants believe their physician or other HCP gives them the majority of their health information (see Table 4-8). Furthermore, in a study conducted by the Public Health Service on information given to hypertensives, blacks were notably more likely to indicate that they receive health information by their HCP than whites. In addition to being more likely to have a diet plan prepared for them (74% of blacks compared to 41% of whites), 84% of blacks, as opposed to 15% of whites, were advised to decrease salt consumption. As the Public Health Service's data reveals in Table 4-7, blacks report receiving more information than whites regarding sodium reduction strategies.

Table 4-7: What advice did you doctor or other health professional give you on how to shop or cook differently in order to reduce your consumption of salt?

Sodium reduction strategies	Total(%)	white (%)	black (%)
told not to add salt	25	21	30
told what food to eat/drink	24	26	18
told what foods not to eat/drink	23	23	21
told how to use herbs/spices to replace salt	11	9	21
told to check food labels	10	11	6
told how not to cook foods	9	10	8

Based on respondents who reported being on a low sodium diet and who were given advice by health professionals. n=154 Source: HHS, 1986, p. 27.

Both Table 4-7 and Table 4-8 below illustrate the importance of health information given by the practitioner. All but four members of my study reported receiving information from their doctor or nurse, and a majority report that HCP constitute their major health information source. Study participants' main source of information, however, is not correlated with adherence level. Statistical insignificance may be due to fact that since the majority of my study participants rely on health care professionals for information, there are too few cases of informants using other health information resources.

Table 4-8: Percentages (and number) of those responding affirmatively to "Do you receive health information from the following sources?" and "From which source to you receive the majority of your health information?"

Source	receive info	main info source
relatives	61%(25)	5%(2)
friends	56%(23)	10%(4)
neighbors	27%(11)	--
dr./nurse	90%(37)	51%(21)
pharmacist	24%(10)	--
Bible/church/ minister	54%(22)	2%(1)
TV/radio	54%(22)	7%(3)
book/magazines	39%(16)	10%(4)
other[8]	24(10%)	15%(6)

n=41

The Debate over "Rationality" and the Culture of Poverty

The field of medical anthropology has developed, in part, to comprehend the variety of behaviors surrounding health maintenance and restoration in a less ethnocentric manner than taken by many other disciplines. Many researchers, determined to understand and explain what may appear to be individuals' internal inconsistencies, nonsensical ideas or irrationality, have been driven to apply a sense of order or their own understanding of such "unscientifically tested" assertions as lemon juice thins the blood, "bad" blood is characterized by thickness and heat, and evil spirits can work their way into your system and raise your blood pressure. However, while some of these theories may not converge with conventional biomedical wisdom, many Western medical practitioners also admit that they do not know why some biomedical, highly technical procedure or medication works, but that it "somehow seems to." The more humble of those practitioners note that medicine should be considered an art rather than a science (Hunter, 1993).

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[8] The "other" category usually contained responses like, "Oh, I just picked things up as I go through life" or "I just know what's good for my body" or "common sense".

It became popular in the 1960s to place what many researchers view as people's "irrational" health beliefs and behaviors into the "culture of poverty" model. According to the model, first articulated by Oscar Lewis (1966), poverty is a way of life that creates and reinforces social, economic, and psychological traits. Among these are the disposition to violence, dependency, and an inability to defer gratification. Since the poor are constantly facing crises, health, especially preventive care, is only given high priority when it becomes an emergency. Because their households are "understaffed" (families without fathers or families with more children than Rainwater believes they can afford), the poor seldom have sufficient resources to purchase medical services or to ensure such health basics as proper nutrition or housing. According to Rainwater (1968), such households tend to have dangerously high stress levels and, given perpetual crises and "overpopulation," illness tends to go unrecognized.

On the other hand, according to the theory, the poor have a very keen awareness of and resultant ambivalence toward their bodies. Rainwater notes that while they take keen pleasure in their physical capacity to dance, fight, and have sex, the poor view their bodies as dangerous, incapacitating, and mysterious. As a result, they tend to over consume over the counter drugs and act deferentially toward physicians. Such deference is difficult for the poor because while they resent the class differences between themselves and the physician, they respect his or her knowledge of the mysteries of the body and healing (Rainwater, 1968)

Critics of the culture of poverty theory claim that it blames the victims for their health status and behavior. The poor do not wish to be poor, but they do not have a middle class health orientation because they lack the higher salaried jobs with good health insurance that facilitate health maintenance. Furthermore, with "downsizing" or dismantling of many health care programs and other social services, the poor are increasingly locked out of health care opportunities. Some detractors of the culture of poverty theory note that blame instead should be "focused upstream" toward a corporate culture that offers inadequate wages and health benefits, markets unhealthy goods and then sells expensive services designed to repair the damage (McKinlay, 1979).

Other critics object to the "lumping together" of all the poor into a homogenous category failing to account for differences in ethnicity and other factors. As Neubauer and Pratt (1981) claim, while ideas such as individual responsibility promoted in the Surgeon General's 1988 Healthy People report may be consistent with the American ideal of individualism, they do not address social and political pluralism.

While materialists would agree environmental conditions give rise to particular customs and observances, they would reject the notion that a group of people embodies immutable characteristics that guide behavior. Harris warns us against dismissing as irrational others' seemingly enigmatic health beliefs and food selection strategies and instead instructs us always to look for the larger picture.

> Many well-intentioned experts do not realize that different kinds of betterment strategies flow from the assumption that food ways are dominated by irrational thoughts as opposed to the assumption that they are dominated by practical costs and benefits. If food ways are largely emanations of ignorant, religious, or symbolic thoughts, then it is what people think that needs to be changed. If, on the other hand, what seems like harmful religious or symbolic thoughts are actually themselves embodied in or constrained by practical circumstances surrounding the production and allocation of food resources, then it is these practical circumstances that need to be changed. Failure to understand the practical basis for food preference and aversions therefore can seriously impede attempts to make good to eat better to eat (1985,p. 236).

Summary

My study sample's overall explanatory model of high blood pressure includes elements usually classified as "folk" as well as those consistent with the biomedical model. Most believe the etiology of HBP centers around consumption patterns; that is, the over-consumption of salt, fat, alcohol, and food in general leading to overweight. To a lesser degree, individuals recognize the contributions of genetic composition, including ethnic predisposition to HBP, being sedentary. God's will is another important influence cited by most informants. Since most study participants view God as all powerful, both giving and taking of life, they attribute much of their destiny in life to Him. However, as the moderate score on the health locus of control survey indicates, most people do believe that while God guides, humans control their own lives.

Biomedical inroads into this sample are quite apparent. While all believed there may be symptoms of HBP, just under half also acknowledged that the disease may be asymptomatic. Furthermore, my sample shows a widespread acceptance of the concept of chronicity; most believe they will always have HBP. This has great implication for disease monitoring and treatment. In fact, most participants express preference for biomedical treatments such as following the physician's prescriptions and dietary advice. Home remedies, prayer, and other "folk" treatments for HBP remain popular, with half of the sample using them. Since all informants expressed their belief in and preference for physicians' remedies, however, biomedicine appears to be the new "popular" medicine.

Finally, adherence level does not seem to be influenced either by health belief orientation or by knowledge about hypertension. There is no statistically significant difference in adherence level between those who endorse more "traditional" beliefs about causes and treatments for HBP and those with views are compatible with their physicians'. Apparently, the health care practitioners, increased accessibility to biomedical facilities, and, to a lesser degree, media messages, have influenced both the health perspectives and behavior of my study sample.

CHAPTER 5
SOCIAL SUPPORT

Group membership and cooperation are essential to humans, who rely on assistance from others to solve challenges they are unable to surmount alone (Dubos, 1977). Because social adaptation involves balancing social demands and expectations with the individual's capacity to respond to those demands, aspects of social support are of interest to researchers in both health and social sciences (Dimond, 1983).

Scholars write hundreds of articles each year with the goal of explaining such helping behavior by understanding who seeks help and why, when, where, from whom and whether the help is truly beneficial. Social support may improve health status, allowing the patient to assume a greater autonomy over health issues, alleviating suffering, and decreasing health care costs (Mitchell and Trickett, 1980). Researchers have documented the strong influence personal relations have on individual health and health behaviors (Mitchell and Trickett, 1980; Cohen and Lazarus, 1983). Social support studies offer the opportunity to consider not only the influences of physician's prescriptions and surgical procedures but also cultural, familial, occupational and environmental influences on health behavior and well-being.

Societal trends such as the decline of the traditional extended family, increasing residential mobility, higher divorce rates and the emphasis on individualism in conjunction with a massive growth of bureaucracy and demand for social services have altered the provision of and patterns of assistance. The formal study of social support has developed out of these changing assistance and interaction patterns, illuminating contemporary kinship patterns and placing them in a context of an applied community study (Jacobson, 1987).

Definitions

Researchers generally define social support as "support accessible to an individual through social ties to other individuals, groups, and the larger community" (Lin et al., 1979, p. 109). Social support differs from "social network," the latter generally refering to a grand total of interactions one has with numerous people or institutions that define ones social environment, while the former is thought of as "metness" or the gratification of one's basic needs (Kaplan et al., 1979; Funch et al., 1986).

Because of the broadness of the above definition of social support, researchers often differ on who and what comprises social support, leading to conflicting assessments of a person's "metness." On the other hand, broad definitions can be useful because they allow the individual to attach a personal significance to support: the extent of "supportedness" depends on a person's perception of how well supported s/he is rather than a researcher's imposed scale (Dressler, 1991). Thus, Kaplan and Hartwell's (1987) conceptualization of social support as "the satisfaction or instrumental function achieved through social connections" is compelling.

Measurement Issues

There are three general methodological approaches researchers take when measuring and assessing social support; they emphasize qualitative or functional issues by asking a series of questions about whom people can call on if they are ill, need money, etc.; researchers ask quantitatively-oriented or structural questions about the number of friends, frequency of interaction, etc.; or they relate one or more sociodemographic variables to health status and social support.

Researchers focusing on qualitative questions generally emphasize such themes as material and physical assistance, information and feedback, intimacy, relationships providing supportiveness and the source and type of the support (Funch et al., 1986; Orth-Gomer and Unden, 1987). Although frequently more time-consuming and difficult for the participant to conceptualize, these surveys tend to integrate affectivity (emotional support), tangible goods, and information.

Quantitative or structural measures have been more successful in predicting outcome (e.g. physical recovery) and are generally easier to administer since they involve a series of easy and brief questions (Rock et al., 1984) Such measures are more likely to be reliable but less likely to be valid and universally applicable than other measures (Orth-Gomer and Unden, 1987).

Finally, there is the most direct and active method of measuring support-- actually correlating sociodemographic variables and "important others'" attitudes and actions to patient behavior (Levy, 1983). Researchers assessing social support through such direct associations frequently emphasize marital status and other relationships believed to be essential in providing social support. The disadvantage of this type of social support research is the tendency to unintentionally ignore confounding variables and sociodemographic differences among individuals. In the case of marital status, for example, most researchers fail to question the quality of the marriage. Is an unhappily married person necessarily more likely to receive help than a well-supported single person? Can we expect a similar degree of support among all ethnic and class groups?

The confounds, generalizations, and inconsistencies associated with social support definitions contribute to measurement and interpretation problems. Many researchers conceptualize social support on the basis of their own particular notions, believing them to be universally applicable (Rock et al., 1984). Many researchers never fully address problems of cultural bias during interviews when using such terms as "stress" and "coping." Nevertheless social support studies are compelling enough to necessitate further research efforts (Jacobson, 1987; Bernard, 1988).

In my research I have attempted to circumvent some of these measurement problems by using two instruments proven to be valid and reliable. The questionnaires created by Norbeck et al. (1981, 1983) consider a totality of assistance by examining the functional and qualitative components of social support ("How much can you rely on this person to take care of you if you were sick?" or "How much does this person make you feel respected?") as well as the quantitative issues ("How many people do you feel close to?"). The instrument developed by Tilden et al. (1990) also addresses both the function and the structure of interactions and recognizes that some social support actually undermines mainstream medical advice and health status.

The State of Social Support Research

Scholars have approached social support theory according to the assistance provided (psychoemotional, informational, or tangible needs), by investigating the source of the help (formal or informal), or by positive or negative evaluations of social support.

Type of Assistance Provided

While social support greatly varies according to the provider's ability and willingness and the recipient's needs, researchers generally agree on three general areas of assistance (Silverstein and Waite, 1993). Psychoemotional or affective support involves acts and attitudes that makes the individual feel s/he is loved and valued and convey that s/he belongs to a network or community with mutual expectations (Cobb, 1976). Kaplan et al. (1979) note social support can provide security, affection, trust, intimacy, nurturance, belongingness, affiliation and approval. The term "weness," for example has been employed to indicate the importance of group solidarity to individual well-being (Kaplan et al., 1979). Other aspects of social support include information provision and instrumental or tangible aid (Jacobson, 1987). Bloom (1990) adds that although affective, informational, and instrumental types of support collectively comprise social support, the same people do not necessarily provide all types of services to an individual.

Source of the Assistance

Most social support studies are organized around two likely helping agents, the structuralistic (or formal) and the individualistic (or informal). A person's social support system generally involves the formal assistance of service entitlements, governmental and helping agencies aid as well as personal help from kin, friends, or neighbors The formal and informal groups usually complement each other by sharing helping functions: the formal group usually assists in material, informational, and technical aid while the informal group assists in affective and idiosyncratic functions. Researchers have concluded that these two responsibilities occupy specific social spaces, but in a "met" situation complement each other rather than conflict (Silverstein and Waite, 1993).

Structuralistic or Formal Support

Formal structure offers assistance to individuals depending on what their needs dictate. Structural social support has become more widespread within the recent decades, possibly to balance decreased family responsibility, particularly for the elderly. As 1960s' legislation ushered in a post-World War II vision of an activist government, support services were provided for the elderly, including those created by the Older Americans' Act and Medicare. Legislators increasingly implemented programs like Medicaid and the Equal Opportunity Act of 1964 as they became aware of health care disparities caused by poverty. The government and its affiliated agencies increasingly became one of the largest suppliers of structural support. Two of its most significant programs, Medicare and Medicaid, illustrate this undertaking and are discussed in Chapter 6 on economic access to health care.

Individualistic or Informal Support

George (1988) characterizes individualistic or informal support as fluid, reliant on members' needs or desires, and adaptable to changing circumstances. There are many reasons why most people use informal support networks; first, it is usually more available and less complicated to obtain than formal assistance; second, informal supports offer a permanent and mutual bond based on affection and life history; finally, informal support is often capable of providing a totality of tangible and psychoemotional help.

Informal personal networks generally involve three sources of support; family, friends, and neighbors (Cantor, 1979).[1] Mitchell and Trickett note that the family can reduce illness in four ways; by transmitting good health habits, by buffering stress[2] that potentially causes illness,[3] by acting as a diagnostician and treating at home and/or by convincing the sick person to seek professional help (1980). Whitehurst and Jaco (1979) note that families encourage symptomatic individuals to seek care before the problem escalates and causes major dysfunction. Litman (1983) concludes that 92% of illness episodes are likely to receive the attention of ones family. The decision to seek health care generally results from consultations with the afflicted's mother or wife (65%), or husband (16%), or children. Many studies also reveal that affective family support can act as a disease buffer "allowing" the afflicted individual to assume the sick role and facilitating treatment adherence (Parsons, 1975; Litman, 1979; Kaplan and Hartwell, 1987).

Neighbors and Jackson's survey of elderly low income blacks reveals similar reliance on informal assistance for medical care. Eighty-seven percent of the sample indicated that they use informal help, particularly the family, for medical help. Fifty percent of these individuals noted they received subsequent professional help, most using informal ties as a screening mechanism to determine whether the symptoms were serious enough to require outside attention. Forty-three percent claimed they use informal help exclusively . Only 4.3% stated that they go directly to a health professional at the onset of symptoms (1984). In addition, Randall-David (1985) found that the African-American family was the major provider of hypertension information. More than half of the families in her study showed a uniformity of response across three generations.

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[1] There is a paucity of literature on African American social support from non-kin and fictive kin. Though many informants list friends as primary supports, they are more likely to discuss family members as fulfilling various needs.

[2] Stress increases human vulnerability not only to psychological symptomology but also to physiological weakness, such as a higher incidence of high blood pressure among low income blacks (Dressler, 1991).

[3] Most researchers accept as "scientific fact" that stress reduces an organism's resistance to disease and agree that social support can buffer stress and be instrumental in disease recovery (Cobb, 1976; Lin et al., 1979; Dressler, 1985).

Evaluations of Individualistic and Structural Social Support Classification

While investigators adopting the informal/formal dichotomy enjoy the ease of clear categories, their approach has several disadvantages. First, unless one involves and specifies a particular region, ethnic group, etc., such a rigid dichotomy may assume a general behavioral pattern regardless of sociodemographic differences. Given what we know about African-American helping behaviors, is it appropriate to consider marital status the primary determinant in social support provisioning? Ethnographies illustrate widely varying social support patterns which defy neat and preconceived notions of helping patterns (Liebow, 1967; Stack, 1974; Dougherty, 1978). Furthermore, characteristics such as socioeconomic status, gender and personality predispositions frequently determine help seeking behavior (Dimond, 1983). For instance, George (1988) cites a study in which working class individuals have different social support structures from other socioeconomic groups, relying almost completely on family to the exclusion of friends, neighbors, and structural supports. Studies also reveal gender differences in reaction to social support. Kaplan and Hartwell (1987) found that while social support was positively associated with diabetic control for women, social support was less likely to work for diabetic men. Dressler (1985) finds the opposite to be true; a stronger social network correlates negatively with depression for women and positively for men. Personality differences may also affect the role of social support in peoples' lives. Some individuals simply do not want assistance, while others cannot do without almost complete reliance on others. Personality traits such as denial, self-esteem, and helplessness affect choice of coping strategies (Fleishman, 1984).

The individualistic/structural model of social support also fails to recognize the nuances in the form support takes. Rather than considering individualistic support as either present or absent, as having immutable characteristics, and as fulfilling particular and rigid functions, assistance can follow any number of formats such as being additive (each support element increasing the total amount of help available to the person), asymmetrical (one type of support, e.g. aid from a spouse, dominates all other forms), task-specific (the requirements of the need dictates the form of assistance), and hierarchical-compensatory (support giving is dependent on the primacy of particular relationship rather than on a task itself) (Cantor, 1979).

A final problem that arises from using a dichotomous classification is that it precludes intermediary roles or linkages between the two dominant domains of support. The literature indicates that two strata may exist between informal and formal supports (Gratton, 1987). These strata are described in the following sections.

Quasi-Formal Non-Intentionally Helpful Organizations

The first stratum, composed of quasi-formal non-intentionally helpful organizations and individuals may provide important aid, especially in the lives of older people. Postal carriers, store clerks, and building superintendents can facilitate interaction with structural support systems by, for example, expediting mail delivery, offering advice, or checking up on someone in a friendly, scheduled interaction. Calnan (1983) reports, for example, that police and shop owners were more likely than the afflicted's own kin to call for an ambulance if they detected illness or an accident .

Quasi-Formal Intentionally Helpful Organizations

Another type of support stratum is the quasi-formal intentionally helpful organizations such as churches and organizations and clubs like the Knights of Columbus, Eastern Star, etc. While these groups are not intentionally established to assist their members, they are often helpful during a crisis and may provide information and affective support. Both Dressler (1991) and I, however, found that participation in and benefits from these organization is limited among low income rural African-Americans. Only 27% of his study sample and 7% of my study sample belong to such an organization.

The African-American Church

One major exception to the low participation of blacks in quasi-formal intentionally helpful groups is widespread involvement in churches serving African-Americans. The black church, a well-known and significant institution,[4] is said to be the only institution black communities really "own".[5] In keeping with its status as a "total institution," researchers attribute the provision of social, health, and spiritual aid to African-American religious institutions, believing it capable of alleviating some of the chronic health problems faced by this community. George, for instance, claims that the African-American church constitutes "an efficacious determinant of subjective well-being"(1988, p. 100). Livingston et al. (1991) discovered that out of five social integration variables such as marriage and employment, only church affiliation seems inversely related to systolic and diastolic blood pressure.

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[4] One has only to consider the impact of black religious centers and leaders on the Civil Rights Movement.

[5] Black churches, many of which own their own property, actually could be considered self-contained and free of financial reliance on the outside world.

There are several reasons why black churches may be uniquely capable of providing such support and enhancing well-being. First, religious belief provides an idiom through which to express ones fears, hopes, dreams and frustrations. Particularly within a subordinated group, religion provides a context or forum receptive of and instructive in preparing one for life's difficulties. Dressler finds that many of the words used by his study participants to express stress and coping are Biblical in origin. "Problems or stressors are those 'trials and tribulations' experienced in a living world where 'sin abounds', where people fail to live up to their 'Biblical precepts.'"(1991, p. 282) Nearly half (49. 4%) of his sample believe religion is the single most helpful institution in ones life.

In addition, many studies propose that older blacks rely on the comfort of prayer as a healing force for not only stress and depression, but also for hypertension and other chronic, measurable diseases. Seventy-four percent of Randall-David's study sample of black women suggested reading the Bible to heal and 89% recommended therapeutic properties of prayer. My study offers similar perspectives; 83% and 80%, respectively, mention praying and reading the Bible for high blood pressure control.

Furthermore, black churches have a sense of community commitment, involving themselves in such activities as blood pressure screenings and weight loss programs (Kong et al., 1982; Levin, 1984; Kumanyika et al., 1993). Church leaders frequently participate in health programs in addition to performing spiritual rituals associated with healing (Dougherty, 1976).

Church Involvement

Most studies on African-American religious life reveal widespread church participation. The more than thirty churches present in Dressler's study of a non-metropolitan community attest to the centrality of religion in his participants' lives. The number and diversity of churches indicate the individual imprint people feel should reflect an institution of such importance (1991). In addition, according to Snow (1983), 90% of African-Americans attend a church and most actively participate. All but two of my study participants were affiliated with a church and 88% attend church at least weekly. Most people spend half of Sunday at church and attend at least one other Bible study or meeting each week. In addition, when asked who comprises their social support system, 41% of my sample listed their pastor. Even when the pastor is not mentioned as a key social support, most study participants feel they can rely on a church leader for spiritual and moral guidance.

A Challenging Perspective

While many analysts agree that the African-American church is a powerful institution amplifying black members' voices as well as a forum for moral support, others believe that it is declining in importance, representativeness, and perhaps never was very helpful in offering more instrumental forms of aid. Dressler (1991) found, as I did, that very few people actually listed substantive health enhancing measures found in the church. Rather, like visiting a doctor, most of my participants felt self-motivation and activism are essential to "get anything out "of church. Thus, while church involvement can bolster both "communitas" and spiritual well-being, most people in my study explained that church attendance heals in an abstract way and does not directly affect dietary intake.

African-American Household Structure[6]

Though scholars and observers almost uniformly recognize African-American families as a locus of social support provision, as W.E.B. DuBois warned us nearly ninety years ago, we must be cautious not to approach "the black family" as a uniform, static entity (1978). Despite this warning, debate continues on how to best characterize African-American family life. How the "typical" or "traditional" black household is organized, the roles played by its various members, and the reasons behind such organization and membership responsibility have aroused quite a debate in contemporary scholarship. It is not my intention to cover the range of theories on African-American household structures since entire books have been written on this topic. However, I will mention several main currents of thought.

First, household composition in this sample tends to differ extensively from white counterparts, primarily regarding marital arrangements. Although Scanzoni (1977) rejects the notion that black/white household differences are anything more than simply a manifestation of class disparities

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[6] I have decided to discuss this controversial and important topic as a subtopic not only because, as the above mentioned study reveals, the household is the basis of informal support and may provide health information, but also because without consideration of who lives with whom, their responsibilities to each other, and their influence on other household members, it is impossible to understand the social environment of health decision-making.

(since blacks consistently find themselves in the lowest classes of society, they tend to have similar household features to each other), many other theorists have proposed explanations for household patterns like female household-headedness, fewer married couples co-habitating, more extensive involvement with the extended family and male absence. Wilson's (1978) *The Declining Significance of Race* popularized the emphasis on economic status over ethnicity. These perspectives are problematic in my view because they ignore the fact that race frequently dictates or at least influences economic status. For example, Dressler points out that black men earn, on average, 75% of white men's salaries (1991).

Explanations of the origin of African-American household patterns vary extensively. Frazier (1939) attributed a matriarchal family orientation to slavery which separated women and men from each other. After slavery's demise, this arrangement continued because blacks were essentially living the same lifestyles as before emancipation. Furthermore, black men's inability to become viable economic producers reinforced this matriarchal tendency. Frazier strongly believed that economic conditions dictated the structure of the black family, positing that the greater the economic marginality of the area, the greater likelihood of female dominated households. However, unlike Moynihan, Frazier believed that in the context of Southern culture, this household arrangement was not disorganized, illegitimate, or pathological, but a useful adaptation to difficult circumstances.

Herskovits (1958) and Nobles (1974) believed that while slavery was a supremely disruptive force in the lives of blacks, the African Diaspora revealed similarities in family structure, informal associations and the high value placed on the extended family. Herskovits writes, "African tradition must be held as prominent among those forces which made for the existence in a sense of kinship among Negroes that is active over a far wider range of relationship than among whites. "(1958, p. 184)

Moynihan's work (1965), not meant to be a scholarly treatise, evaluated such increasingly common societal trends among blacks as male absence from households, out of wedlock births, and reliance on public assistance. Like Frazier, he attributed these conditions to the effects of slavery and discrimination. Moynihan felt that an African-American matriarchal tradition would render blacks different or maladaptive within the dominant culture. As he notes, "at the center of this tangle of pathology is the weakness of the family structure. Once or twice removed, it will be found to be the principal source of most of the aberrant, inadequate, or anti-social behavior that did not establish, but now serves to perpetuate, the cycle of poverty and deprivation."(1965, p. 30)

Rainwater (1970) argued that economic, political, and social oppression has denied blacks the opportunity to achieve the "American dream" (professional careers, achieving the good life, monetary satisfaction, etc.). In response, blacks have done whatever they felt could approximate that dream: these life adaptations, however, have been most costly to family members and ones cultural community.

Billingsley (1968) and many other more recent scholars (Stack, 1974) have rejected the "pathology" perspective, refusing to evaluate the black family on the basis of white America. Echoing the ideas of Frazier, Billingsley recognized the unique history and culture of blacks, as well as the discontinuity created by slavery and its perpetual racism. As he writes, "It (the Negro family) is, in our view, an absorbing, adaptive, and amazingly resilient mechanism for the socialization of its children and the civilization of its society."(1968, p. 33)

While scholars continue to debate the origins and causes of the African-American household structure, black families clearly organize themselves in a variety of manners some distinctly different from many older whites which may profoundly affect social support patterns (Stack, 1974; Dougherty, 1976; Dressler, 1991). As Figure 5-1 indicates, my study sample also lives in a diversity of situations, but most individuals live alone or with their extended families.

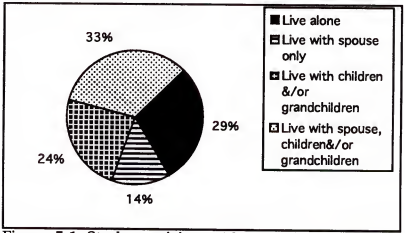

Figure 5-1: Study participants' household composition, n=41

African-Americans' Social Support

There are several issues that make studying social support among African-Americans difficult. First, there is an absence of current literature on the household composition of elderly black rural dwellers. In addition, as mentioned above, since familial structures differ between most researchers and their informants, much of the literature fails to adequately understand and consider a diversity of helping sources. For example, what type of supportive behaviors have evolved in this community independent of marriage? How helpful to adherence are grandchildren, for example, many of whom live with their elderly grandparents? What about the support provided by ones extended family of fictive kin? (Liebow, 1967; Stack, 1974)

In addition, many researchers, unfamiliar with African-American beliefs, are likely to assume importance of, for instance, a spouse, or ignore helpful others that may not be apparent to them. Several of my study participants failed to list their spouse as a "helpful/important other," despite their co-habitation. Some of my informants view these spouses as, in the words of one woman, "Always getting under foot and not giving me nothing." In addition, Snow's study participants list the dead as current social supports (1993). While I did not observe this same phenomenon among my study sample, one of my study participants did mention Jesus Christ as her primary source of social support.

Additionally, not only does the household and family composition vary between researcher and study participant, but researchers also make incorrect assumptions about African-Americans and the actual provision of aid. As Dressler points out, "Household and family are not coterminous in the black community. Important social functions of the family are performed by family members not residing in the same household" (1991, p. 127). In other words, black family members frequently provide a variety and quantity of supportive behaviors, especially to older members who are not able to manage on their own, regardless of who lives in their home. Dressler's finding appears to be consistent with my sample. An ANOVA performed on my data indicates no significant difference (p=.927) in perception of support as measured by a Likert-like questionnaire (Tilden et al., 1990) relative to household composition.

Patterns of Support

As Jacobson notes "cultural context informs the meaning of social support and social support illuminates the cultural context within which it occurs" (1987, p. 43). Blacks, for example, tend to have known those they consider socially supportive for more years than whites (21 years on average for blacks; 14 years for whites). Dressler (1991) mentions that black elderly tend to rely on kin support more than formal structures because they grew up during a time when they were denied access to participation in the larger society. In addition, while whites tend to classify only a spouse or a friend or two as a helper, blacks claim to have a more extensive series of friends who assist them (Litman, 1979). The most helpful individuals in most white adults' kin groups are generally thought to be (in descending order) spouse, child, sibling, and other relatives. Most blacks, on the other hand, seem to follow Jacobson's sequence of social support provisioning called the "generalization and gender" rule (i.e. support is called on according to the specific order of generation and sex). Elderly blacks first call on their children (preferably daughters), then siblings (preferably sisters), then grandchildren (preferably granddaughters).

I constructed Table 5- 1 according to Norbeck's questionnaire (1981) in which study respondents list those people they consider helpful and/or important to their lives. With a mean of eleven supportive people mentioned, my study members appear to be quantitatively well-supported (Norbeck, 1981). There is no significant difference in the number of support sources mentioned according to gender, education, age, household income, or by those perceiving different levels of support or frequency of contact with listed helpers. However, the number of people listed as helpful and/or important is strongly associated (p=.007) with the average number of years study participants have known those listed.

Table 5-1: Study participants' social support providers by percentage

Source of support	% (n) listing support source
friend (either gender)	93%(38)
daughter	71%(29)
sister	63%(26)
son	56%(23)
spouse	44%(18)
niece/nephew	44%(18)
cousin	44%(18)
pastor	41%(17)
grandchildren	41%(17)
brother	39%(16)
son/daughter-in-law	29%(12)
parent	10%(4)
neighbor	10%(4)

n=41

Although most study participants expressed that the family provides more reliable and extensive support, friends are the most frequently mentioned support source. This may be due to the fact that family members vary (some people do not have siblings, children, living spouses or parents, etc.) while nearly everyone has an important friend or two close to his or her own age. As Jacobson predicted, daughters and sisters are also very popular aid resources. Fewer than half of the study participants list a spouse as a supportive individual, probably reflecting the high incidence of widowhood, divorce, and separation. Interestingly, despite the long term residency, very few people mention neighbors as sources of assistance. I frequently heard expressions of suspicion and mistrust when discussing neighbors.

Evaluations of Social Support

The majority of literature finds that social support enhances health status, possibly by positively influencing adherence to treatment recommendations. Haynes, Taylor, and Sackett's (1979) meta-analysis reports that out of 52 studies, 33 found a positive relationship between social support, health status, and adherence levels, 18 found no relationship, and one study found a negative association. Cobb's (1976) meta-analysis further confirmed a positive correlation between extensive social support and adherence in 20 out of 21 studies. In addition, men with supportive and encouraging wives were more likely to follow a prescribed medication regimen than those without such spousal support (Doherty et al., 1983).

Positive evaluations also include a study conducted by Kaplan et al. (1979) where recently unemployed men with supportive wives suffered significantly fewer illness than those without helpful spouses. Earp and Ory (1979) similarly discovered that those hypertensives with "significant others" were more likely to maintain blood pressure control than those living alone. Another study reveals that those hypertensives with low social support were 50% more likely to die prematurely (Orth-Gomer and Unden, 1987) . Extensive documentation reveals that immediately before times designated to be gregarious events (such as holidays), there is a higher suicide rate. Some studies suggest that people are reluctant to face the prospect of enduring such a socially significant time without companions (Bloom, 1990).

Conversely, Cobb notes that in the absence of social support an individual is more vulnerable to alcoholism, tuberculosis, arthritis, giving birth to a low weight baby, depression and premature mortality. Similarly, in high stress/low social support circumstances disease rates are higher. Anderson et al. (1991), for example, found that chronic stress in laboratory animals and humans increases sodium retention and blood pressure.

While few researchers have come to the conclusion that social support is deleterious, skeptics concern themselves with both the reliability and validity of methods and with theoretical problems. Freidson (1960), for example, rejects the principal that social support always facilitates health utilization and adherence, noting that the "lay culture" of medical knowledge directly and harmfully conflicts with the "professional referral system." The lay culture is powerful, acting to screen information and presenting itself as uniquely capable of rendering the most effective treatment solutions, in addition to having personal knowledge of the ill person's circumstances. The professional referral system also believes itself to be the guardian of health and the translator of esoteric knowledge. The sick person straddles the two systems, basing his/her health decisions on the degree of congruence between the two and on the relative number of lay consultations between the first symptoms and the final decision to seek health care. This frequently results in arbitrary medical care and treatment based more on persuasive personalities and circumstances than on consistent, rational decisions.

Other researchers have increasingly questioned whether a diminished quantity and quality of support constitute helpfulness at all. Joining researchers in the United States, Krause and Liang (1993) discovered that when under certain types of stress, Chinese elderly are unable to mobilize emotional assistance. Specifically, the authors noted that the elderly were able to overcome financial crises with instrumental aid from others, but that affective support has significantly eroded. With the greater inclusion of marginal populations into social programs starting in the 1960s, some researchers believe that traditional support networks offering instrumental, affective, and informational aid have begun to decline in importance (Martin and Martin, 1985; Silverstein and Waite, 1993).

Evaluations of African-American support

There has been a long term scholarly commitment to the study of the black family and the helping tradition. Most of these studies emphasize that African-Americans, particularly the elderly, receive far more extensive support than whites due to socialization patterns (McAdoo, 1988) that counter the effects of poverty (Stack, 1974) and societal marginalization (Martin and Martin, 1985). Many of such studies assume that there is a traditional African-American value of reverence for the aged, the centrality of the family, and a high appraisal of cooperation and sharing. Such "functional interdependence" (Silverstein and Waite, 1993) permits the poor to reallocate or transfer resources easily, increasing access to goods to meet emergency needs. Even when blacks are no longer living within a financially critical situation, however, many retain such socially supportive family patterns (McAdoo, 1988).

Recently, however, many social support researchers have begun to reject traditional assumptions of extensive helping behavior among African-Americans, claiming that social circumstances have changed and most research has not remained current, or that many social support studies suffer from a lack of empirical basis (Gaudin and Davis, 1985; Martin and Martin, 1985; Gratton, 1987; Silverstein and Waite, 1993). Gaudin and Davis' study (1985), for instance, reveals that 51% of black and 83% of white mothers[7]

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received assistance from non-formal sources over a period of six months. Silverstein and Waite (1993) discovered that black middle-aged women were less likely to both provide and receive emotional and instrumental support than their white counterparts until the onset of old age; their research, however, reveals that upon old age, black women report receiving more extensive support than white women.

Despite the assumption that age confers an elevated status among African-Americans, particularly women, many elderly blacks feel dissatisfied with the support they receive. As one woman in Dressler's study warned, "You've got to rely on yourself because family members won't always be there for you to rely on. It's imperative that you learn to be self-sufficient. " (1991, p. 140) Self-sufficiency can be difficult, however, when one lacks specific material needs such as transportation. An 82 year old study participant must pay her grandson or his wife ten dollars to drive her to a doctor's appointment twenty-five miles away. She is angry about it, but feels she has no other recourse.

Despite these complaints about social support, most of my study participants express an high overall sense of satisfaction in the affective, informational, and instrumental realms. Perhaps this satisfaction with social support is due to participants' low expectations of their friends, family members, and others combined with receiving some assistance from formal institutions.

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[7] Most of the literature confirms that women are more involved in both the provisioning and receiving of social support. There are several reasons for this; women are more likely to be socialized into a nurturing, interactive role and many have spent a lifetime engaging in such activities, particularly if they did not work outside of the home; since most men's contribution to the household is derived from their outside employment, male production may be consider in monetarized terms only; and male socialization may disallow receiving assistance, particularly in the emotional realm.

Study Results

The Potentially Influential Role of Support on Adherence

Social support can potentially affect an individual's adherence to dietary treatment recommendations in several ways. First, family or friends can encourage, facilitate, or discourage one from visiting the medical office where they actually receive the treatment recommendations. Since study members make an average of five physician's visits annually, however, we can speculate that either all supportive people encourage their loved ones to seek medical attention or that supportive influences do not seem to constitute a major influence in the decision to seek medical care.

Second, an individual can provide information that either converges with or contradicts a physician's advice, possibly either reinforcing or discouraging recommendations. Since 61% and 56% of my study participants receive information from relatives and friends, respectively (only 5% and 10% list these as their main information sources, however), socially supportive individuals may contribute a sizable quantity of information concerning treatment. Yet, since almost all informants receive information from their physician, most receive the majority from him or her, and all but one person believes their physician to be the most legitimate source for health care and advice, it seems likely that informal supports exert only a minimal influence on providing information that determines treatment adherence. Furthermore, my data indicate no significant correlations between number of correct responses to the Public Health Service's hypertension knowledge questionnaire and number of supports or perception of supportedness, or household composition.

Last, others, particularly those living in the same household and sharing meals, may affect food purchasing, preparing, and consuming. Household members may influence food selection and preparation in a positive direction (for example, by reminding someone of what the doctor says about too much fat or by using the salt shaker too heavily) or a negative direction (for instance, by refusing to eat "healthy foods" thereby requiring time-consuming preparation of separate meals). Many informants who live with their children or grandchildren report modifying their dishes by not using the table salt or by decreasing the portion size rather than preparing meals lower in salt and fat for themselves. None of the study participants reports preparing separate meals to conform to his or her physician's dietary guidelines, though most believe they have become more careful with meal ingredients and quantities.

Study participants have minimal assistance with dietary-related activities; 71% and 63% state they alone do most of the shopping and cooking, respectively. The Kruskal-Wallis ANOVA reveals no correlation between either responsibility for food shopping (p=.783) or cooking (p=.797) and adherence level. One participant notes, "I done it by myself without no one's telling me how, what, or when to take care of myself."

Additionally, no correlation was discovered between meal sharing and adherence. While very few participants eat with others most of the time, a habit that might theoretically enhance dietary adherence if ones social supports monitor intake, those who do share most meals are no more likely to follow their physician's instructions than solitary diners.

Perceptions of Support and Adherence

The Norbeck instrument (1980, 1983) assesses social support by considering both quantitative (number of helpers, frequency of contact, years known) and qualitative (perception of supportedness access by a Likert-like scale) factors. With a mean of 11 helpful persons listed, a frequency of contact of 4.3 (on a Likert-like scale of 1 [lowest] to 5 [highest]), and a mean of 34 years of knowing such "important/helpful" individuals, my study sample seems well-connected, they see supportive people often, and have known them for a long time.

The perception of supportedness is not associated with most other factors such as educational level, gender or age. This lack of correlation may be due to the fact that since nearly everyone expresses an extensive degree of social support, there are too few cases of those with low levels of support to be statistically significant.

Furthermore, there is no statistical significance between the average, combined number of years informants know their "important" others and adherence or the number of people in each participant's network and adherence. There is no statistically significant relationship between the number of persons in a network or how long a participant has known them and adherence level. However, there is very strong relationship (p=.0003, r=.586) between the frequency of contact and the perception of supportedness. In addition, the average number of years informants have known their "important/helpful" persons is positively associated (p=.007, r=.378) with the number of individuals informants listed.

Like the IPRI (Tilden et al., 1990), the Norbeck's qualitative assessment of supportedness averages a Likert-like series of questions about "important/helpful persons" listed by participants. There is extensive agreement (r=.94) between the two data sets, reinforcing the validity of both instruments.

Data from both instruments reveal a lack of statistical association between perception of supportedness and adherence level. I believe that this lack of association is due to two factors; first, as previously mentioned, since almost all participants highly assess their social support, there are too few cases of inadequate aid to provide statistical significance.

Second, the types of dietary modifications most informants make to conform to their physicians' treatment recommendations probably do not require extensive social support. Rather than embarking on a "program" of dietary changes that disrupts their lifestyle, food intake patterns, and social relations, most study participants have "cut down" or modified. Making these changes involves a minimal commitment rather than a total alteration of eating styles that requires the enthusiasm and monitoring of many helpful individuals. Only in the case of the most egregious of foods, such as pork, and heavily fried substances, have informants radically altered their consumption habits.[8] Those who have lost the recommended weight or decided to eat within the guidelines of their physicians' recommendations have done so without greatly affecting other household members or significant others or requiring extensive participation and assistance from them. Thus, dietary alteration seems to take minimal enough, to be self-initiated, and, consequently, to involve only a modicum of support.

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[8] Though limiting consumption of pork and other foods most people acknowledge as dangerous seems to be associated with the aging process. One male study member notes that while he used to eat great quantities of pork and other foods high in fat, he "just can't take all of that rich food now. Look like all of that just turned against me and now I know even if I just look at it, seems to do me no good."

Summary

The inclusion of social support considerations into health studies and the proliferation of articles discussing those findings signals a growing recognition of the importance of human interaction to illness prevention and recovery. While most people have long acknowledged this relationship between interpersonal bonds and healing, contemporary research has attempted to render the topic scientific through both broad and narrow definitions, complex classifications, and quantification. In so doing, researchers have legitimized the concept of socially-based healing. However, many scholars have undertaken poorly designed or executed research, perhaps as a result of initial enthusiasm without the benefit of hindsight, by overlooking seemingly important influences such as quasi-formal institutions like churches and culturally-established patterns of social support.

Such has been the case in many studies of African-American familial and helping traditions. While researchers continue to wrangle over the origins of the "distinctly" black family, many of those who study social support issues related to African-Americans also underestimate the complexities of these patterns and structural differences between blacks and other groups. The well-documented "helping tradition" particularly noticeable among the black elderly includes a wide array of supportive family members within and outside the household, old time friends, fictive kin, and even those "not of this world." My data confirm this complex and generous web of support: with an average of eleven "helpful others," study participants' generally expressed a good deal of satisfaction with informational, instrumental, and affective assistance.

While the many methodological and theoretical challenges still prevent researchers from definite, reliable, and verifiable conclusions, most studies correlate socially supportive relationships with higher levels of adherence to treatment recommendations and improved health. My data, however, indicate that social support is not a determining factor in dietary adherence. I previously assumed that supportive others might influence activities associated with food intake, such as purchasing, preparing, and consuming food as well as information on dietary activities. For instance, if ones daughter was informed of and committed to employing dietary modifications recommended for antihypertensive therapy and she primarily shopped and prepared meals, her mother's level of adherence would theoretically increase. If, conversely, a grandchild lived within an informant's household and refused to eat anything "fresh" or anything besides fried chicken, hamburgers, and French fries, chances are that the grandparents might prepare, and ultimately consume, similar meals rather than going to the trouble of separate meal preparation. Similarly, I anticipated that eating with others might influence adherence through socially supportive monitoring or encouraging food intake. Surprisingly, however, none of the food-related activities was statistically associated with adherence level.

Thus, despite being qualitatively and quantitatively well supported by important others, study participants arrive at their dietary habits on their own. This lack of association may be due to the minimal interruption an informants' dietary alteration causes to household food activities, and subsequently an informant's lack of need for a great deal of input from friends and family. Cutting back a little on salt, fat, and, if necessary, on weight, may not be the formidable task requiring extensive social participation that accompanies, for example, a chemotherapy regimen or an extended period of bedrest. In addition, since most physicians' dietary recommendation are consistent with "traditional" notions about health maintenance, informants may only need gentle reminders from what they perceive as "the legitimate health source" rather than extensive assistance from supportive others. "Friends are as friends do," says one informant, but apparently in the realm of dietary modification and treatment adherence, there is not much for "friends" to do.

CHAPTER 6
ECONOMIC ACCESS TO HEALTH RESOURCES

To consider how economic access to medical treatment influences adherence requires investigating several interrelated topics--the affordability of medical recommendations in light of the individual's economic status and utilization behavior; potentially enabling institutions like insurance coverage, social programs and neighborhood health clinics; barriers to medical care and adherence such as treatment discrimination and inadequate transportation. Economic determinants of dietary adherence also include not only direct and obvious expenses such as physician consultations and high-priced medications, but may also involve costlier food choices and expenses associated with preparing separate meals from the rest of the household.

Exploring issues such as these related to economic feasibility of medical treatment has become of increasing concern in a demographically changing, fiscally concerned nation (Feinstein, 1993). While the current impetus for health care reform is predicated on dissatisfaction with insecure provision of medical services, elderly and culturally-sensitive health care inevitably will be drawn into the debate due to changing demographic trends in the United States. Advances in acute and chronic disease treatment have dramatically increased life expectancy, resulting in "postponed death" (Cassel et al., 1992) Once fatal illnesses, such as hypertension,[1] now have become diseases treatable with extensive and expensive care.

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[1] Hypertension is the second most commonly self-reported chronic condition for men 65-74 and women over 64 after arthritis (Cassel et al., 1992.)

Increased life expectancy illustrates contemporary control over previously life-threatening illness. Today, life expectancy is estimated to be 78.5 years for women and 71.8 for men (Cassel et al., 1992). While in 1900, only 4% of the United States population was age 65 or older, current estimates hover around 12.6% (U.S. Bureau of the Census, 1992). Demographers estimate that by the year 2050, 23% of the population will be over 65, primarily due to the presence of "baby boomers".[2] From 1990 to 2010, those over 65 are expected to increase from 31 million to 39 million. Not only are greater numbers of people reaching age 65, but increasingly people are living to advanced old age; those surviving to their sixty-fifth year, generally live an additional 16.9 years (Senate Hearing, 1994). Currently 1.2 % of the population is over 85 (9.9% of the over 65 group), but by 2050 population experts predict that this oldest group will comprise 4% of the general population and 20% of those over 65 (U.S. Bureau of the Census, 1989). According to the U.S. Census Bureau, those 85 and older comprise the fastest-growing group, projected to double from 1991 to 2020 and to increase fivefold by the year 2050 (1990).

The older African-American sample is also increasing at an unprecedented rate, numbering 2.3 million, or 10% of the older population and comprising the fastest growing segment of the black sample (Senate Hearing, 1994). By 2025, the black elderly population is predicted to increase to 12 million, or 15% of the older population. Currently, only 8% of the black population is over 65 and 8% of this group is over 85. But with increasing life expectancies, demographers estimate that the number of elderly blacks increases by as much as 25% annually (Bang and Greene, 1988).

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[2] Comprising one third of the current United States population, baby boomers will reach old age between 2011 and 2030 (U.S. Bureau of the Census, 1990).

Such an increasing presence of both elderly mainstream and minority Americans have great ramifications for health care policy. Though slightly over 10% of the population is over 65, older people consume over a third of the nation's health resources (Kang and Bloom, 1993); considering the aforementioned demographics, our nation must prepare for escalating health-related costs in the future. In addition, as this chapter discusses, the United States' elderly population and particularly African-American elders, live under significant economic constraints. To most efficiently use scarce available resources and provide quality care, health care professionals and policy makers must employ culturally sensitive and appropriate methods and plans. Enhanced understanding of this population's access to and utilization of medical services and resources is the basic first step in approaching this goal. With the assumption that greater access to health services enhances ones ability to obtain and theoretically follow treatment recommendations, this chapter addresses these fundamental health care access issues among African-American elderly.

Barriers to Adherence

Economic Status of Elderly African-Americans

Poverty, operationalized by the United States government in 1990 as earning below $6,268 for an individual or $7,905 per couple, plagues African-Americans, particularly the elderly, unmarried women, and rural residents (Schick and Schick, 1994). Blacks in the United States generally earn scarcely 60% of whites' income, and are more than three times as likely as whites to be poor. Almost 40% of older blacks live below the poverty level; moreover, 72% of this population are, according to the Census Bureau's standards, "economically vulnerable," meaning their income falls between poverty level and twice the poverty level (Harel, 1990, pp. 95 and 154).

Elderly black women (often described as suffering from triple jeopardy) are only surpassed in their poverty by older Hispanic women, having median incomes of $5059 and $4992, respectively, while with an average annual income of $13,391, older white men out earned all groups (U.S. Bureau of the Census, 1989).[3] Sixty-seven percent of older black women have incomes under $3000 annually and 17% do not even earn one thousand dollars a year (Coleman, 1993). Poverty disproportionately occurs among older unmarried African-American women household heads: Fifty-two percent of such households live in poverty, compared to 22% of households headed by older white couples (U.S. Bureau of the Census, 1990). As Table 6-1 indicates, black elderly are disproportionately poor.

Table 6-1: Percent poor in 1990, by age, sex, and ethnicity: March 1991.

	65-74 years of age		75 years and older	
Ethnicity	Male	Female	Male	Female
white	4.5%	10.2%	7.8%	17.3%
black	24.6%	33.6%	34.4%	43.9%
Hispanic	18%	22.7%	20.1%	30.1%

Source: Schick and Schick, 1994.

This is a serious concern, as the incidence of female-headed households is increasing and, consequently, predisposing greater numbers of people to poverty. In 1940, for example, 18% of African-American households were headed by women; by 1980, over half of households heads were female (Harel, 1990).[4] Dual earner families enjoy 24% greater incomes than single earning households (Dressler, 1991). In addition, studies confirm that married women tend to self-rate their health much better than unmarried women, primarily due to economic benefits typically accrued from marriage (Hahn, 1993).[5]

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[3] The corresponding figures for median income in 1989 are $7816 for White women, $8192 for Black men and $8469 for Hispanic men.

[4] Watson carefully makes the argument against the concept of "feminization of poverty", which he considers victim-blaming. "It falsely suggests there is something about the nature of women and/or femininity that explains the

Economic deprivation has plagued African-Americans for many reasons, among them institutional and personal discrimination, low education, poor paying jobs with few benefits and, as mentioned above, a household structure with more dependents and fewer economically productive members. Among those over 60, 75% of whites and 33% of blacks completed grade school; twenty percent of whites and 8% of blacks graduated from high school; and 15% of whites and 4% of blacks received their college diplomas (Coleman, 1993).

As a consequence of this low education achievement and of institutional discrimination, blacks tend to be over represented in the secondary labor market, characterized by low wages, fewer benefits such as health insurance, and physically endangering activities (Hahn and Lefkowitz, 1992).[6] Furthermore, since many elderly blacks worked as sharecroppers or as

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growing incidence of poverty among them" (as quoted in Harel, 1990, p. 55). Undoubtedly women are poor, but this, according to Watson, is due to exogenous forces such as "sociosexual identity" by which he must mean limited value placed on women's productive and reproductive activities.

[5] However, among economically secure women (those who own their own homes, have health insurance, and stable incomes), differences in self-perceptions of health disappear (Hahn, 1993).

[6] A 1980 employment survey of African-Americans finds that 27% are operators, fabricators, and laborers; 24% are involved in technical, sales, administration professions; 23% are in service occupations; 13% are professionals/managers; 9% do crafts or repairs; 2% are fisherfolks or farmers. Forty-four percent of the nation's domestic cleaners are black and 33% of United States garbage men are black. However, since this is a record of contemporary employment patterns, we should assume that even few blacks

domestics, social security deductions were minimal if present at all;[7] consequently, the average older black receives $2000 per year less in social security payments than an elderly white (Hill, 1988). In addition, life savings among those with such inadequate earnings are generally paltry; with a domestic worker earning three dollars weekly in the 1930, for example, few older blacks have savings (Dressler, 1991). Many of my study participants placed any savings they amassed into building their home; consequently, while most do not have any savings at least they own their own house.

Because most older blacks were not able to receive education or training to enter more lucrative professions, they have also been disproportionately subject to job-induced disabilities causing premature retirement and/or have not been able to amass savings to insure a comfortable retirement from the workforce; consequently, many "retire" early but then re-enter the workforce at a later period semi-permanently. Retirement, therefore, among African-Americans does not appear to resemble the traditional American pattern of leaving a lifetime job at age 65 and collecting a somewhat adequate pension. For example, blacks are more likely to retire at 55-64 years though 45% of one African-American sample retired permanently only after age 70 (Gibson, 1993). Working well into old age is especially prevalent among those earning under $6,000 annually, a trend that Jacqueline Jackson calls "dying from rather than retiring from the work force" (as cited in Gibson, 1993, p. 286).[8]

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occupied managerial or professional jobs back when the elderly were in the workforce. (Harel, 1990).

[7] Domestic workers, gardeners, and cooks have been covered by Social Security since 1951. However, even if these wages were reported, they were generally so minimal that the social security payment will be extremely low (Brown, 1989).

My study sample approximates the 20% of African-American elderly who are still employed or consider themselves "retired/unretired" (Coleman, 1993).[9] One study participant sells heavy farm equipment at a weekend flea market. Another has been a housekeeper/cook for a prominent community member since her family moved off of their farm in the 1920s. She notes that while her arthritis prevents her from doing anything too physically challenging, she still cooks the meals four times a week and does light housekeeping. When asked why she continues to work she laughingly said "because Mr. M. can't live without my fried chicken" and more philosophically added, "you need to work to live." A man on disability restores bar-be-que grills for " a little something extra on the side."

Poverty is a common occurrence in my study sample's county and among the 41 individuals themselves. While the county-wide average white per capita income was $13,817 in 1993, blacks' was less than half, at $6,448. Twenty-three percent of whites and 40.6% of blacks lived below the poverty level (Almanac, 1994). Rural residency may explain such high prevalence of poverty among my study sample, as African-American rural residents have a greater tendency to be poor than their urban counterparts. Over half of rural-dwelling black elders in the United States live in poverty compared to one-third of older black urbanites. Black older women in rural areas are particularly likely to live under poverty: sixty-eight percent live are considered poor as compared to 40% of rural white elderly women (Senate Hearing, 1994).

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[8] Social security regulations permit those 62-64 to earn $6120 annually ; over sixty-five $8400 annually ; and unlimited earnings past age seventy without loss of social security (Brown, 1989).

[9] One-third of blacks over 55 say they are retired (Gibson, 1993).

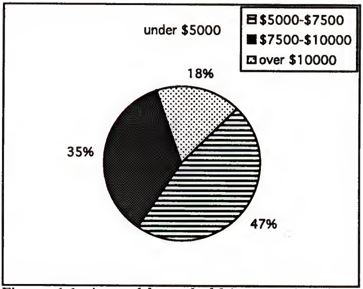

Figure 6-1: Annual household income distribution of study sample

Among my sample, those with the lowest incomes tend to be female (70% of those in the lowest group income are women as opposed to 31% of the men); have fewer years of education; and, though statistically insignificant, tend toward lower adherence to their physicians' dietary recommendations. (For example, 54% of the lowest income group are considered low adherers as opposed to only 20% of the highest income group). However, age, and score on the Public Health Service's hypertension questionnaire do not seem to be related to household income levels. It should be recalled, however, that the study members do not differ greatly on income level; all 41 informants fall near or below the poverty level.

Increased Risk of Poor Health Associated with Rural Residency[10]

Many scholars have documented that living in rural areas predisposes people to poorer health associated with inadequate resources (Haynes, 1984; Hill, 1988; Dwyer, Lee, and Coward, 1990; Jecker and Berg, 1992; Feinstein, 1993; Braden and Beauregard, 1994). A recent study documents that rural residents tend to rate their own health as poor much more often than their urban counterparts. In fact, 28% of rural dwellers consider themselves to be in poor or fair health, seven percentage points higher than urbanites (Braden and Beauregard, 1994). Black non-metropolitan elders are even more likely to rate their health as poor; 56% rate their health as poor, compared to 43% of non-metropolitan African-Americans (Schick and Schick, 1994).

Rural residents are also more likely to be less healthy in objective standards. Forty-seven percent of rural elders, compared with 40% of urban adults, have been diagnosed with a chronic condition. In addition, older rural dwellers have more limited activities and are more likely to have received medical treatment than their urban counterparts (Dwyer, Lee, and Coward, 1990; Braden and Beauregard, 1994). Cutler and Coward reveal that non-SMSA non-farm elders (most of my study sample), are more likely than any other groups to experience sixteen of the most debilitating and serious medical conditions (1988).

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[10] Definitions for "rural" include more limited standards such as non-metropolitan counties with under 20,000 inhabitants. However, the standard definition of "rural" (that used by the U.S. Census Bureau) is any community with fewer than 2500 residents contiguous to a central city of over 50,000 (Jecker and Berg, 1992). By this standard, a quarter of the nation resides in rural areas.

A variety of studies correlate poor health status with poverty and lack of availability of health care facilities. Rural dwellers, who typically earn 28% less than urbanites and account for one half of the nation's poor, are less likely to have been employed in a position offering health coverage and consequently spend a disproportionate part of their income on out of pocket medical expenses (Dwyer, Lee, and Coward, 1990; Hahn and Lefkowitz, 1992). This amounts to rural residents spending approximately 10% more on out-of-pocket medical expenses than non-rural dwellers (DeFriese and Ricketts, 1989).

Contrary to popular opinion, medical expenses are not appreciably lower in the most rural region of the nation, the South: a 1992 estimate of annual physician visit costs ranked the Midwest the least expensive ($417) followed by the South and the West ($480 and $524, respectively) (Hahn and Lefkowitz, 1992). Compounding this problem is the government's assumption that since costs are higher and procedures more likely to be done in urban areas, Medicare payments should be limited in rural areas. Consequently, payments are 25% lower in rural areas, usually requiring the patient to make up the difference (Brown, 1989). In addition, despite their disproportionate representation in the low income group, rural dwellers receive only 25% of Medicaid funds (Hill, 1988).

Even when rural residents can afford health services, the facilities and personnel are often absent. Three-quarters of all rural counties, or approximately 35-40 million people, are considered medically underserved (Haynes, 1984). Hill (1988) estimates that of those medically underserved, 60% are rural inhabitants and 84% of these areas suffer from a shortage of medical personnel (1988). Perhaps because of this shortage, rural residents, despite their greater illness prevalence, averaged one fewer ambulatory care visit annually than their urban counterparts. This difference markedly increases among those who self-rate their health as fair or poor: those rural residents in this category have two fewer office visits than urbanites assessing their health as poor or fair (Braden and Beauregard, 1994).

Rural areas also have notably fewer health care professionals, despite net gains during the past decade in both urban and rural areas. For example, in 1988, there were 226 physicians per 100,000 patients in metropolitan areas compared to 98 per 100,000 in non-metropolitan areas (Frenzen, 1991). Despite comprising a quarter of the national population, rural areas contain only 19% of registered nurses, 15% of health technologists, and 13% of physicians and dentists (Haynes, 1984). Furthermore, specialists are disproportionately absent and osteopaths present in the country (Braden and Beauregard, 1994).

The responsibility for this unfair distribution of health staff and facilities may have had its inception with the Flexner Report's restructuring of American medical education along with a general decline of the rural lifestyle. According to Roemer, the more time-consuming and costly nature of the report's recommendations for medical school precluded rural, poor, minority and female students from pursuing medical degrees (as cited in Haynes, 1984). As a result, medical students overwhelmingly began to be white, upper class, and urbanites who could take time to study rather than working on family farms. Once physicians, such individuals would remain in the familiar urban areas where medical schools were located rather than moving out to the countryside. In addition, between 1880 and 1930, the rural population declined from 77% to 44% of the general population; among those leaving were current and future physicians (Haynes, 1984). By 1973, urban areas had 518 people per physician, compared to 2232 rural residents per physician (Haynes, 1984). These two factors-- the poverty level of rural inhabitants coupled with inadequacies of rural health care resources-- lead many rural inhabitants to forego preventive care, making medical visits only when seriously ill and further endangering health and increasing costs (Patrick et al., 1988; Jecker and Berg, 1992).

Hill's rural Georgia community study illustrates some of these aforementioned complications of providing appropriate health care and enhancing health status. Differential health knowledge between HCP and patients, ineffectual health promotion and education, lack of recognition that disease patterns have shifted from acute to chronic, racial bias, assumptions of community homogeneity along with logistical problems such as inadequate transportation, inability to afford treatment, and inadequate facilities and personnel prevent adequate medical assistance and compromise health status.

The Connection between Low S.E.S., HBP, and Being African-American

Most literature concerned with HBP addresses the disproportionate prevalence within African-American population. Discussions of etiology, while as previously addressed are multifactoral, inevitably include speculations on the interaction between poverty, stress, low health status and skin color (Morgenstern, 1980; Saunders, 1991).

Many studies have found that skin color may not be directly related to blood pressure, but rather that environmental influences such as social class and education may be more responsible for HBP. Keil et al. demonstrate that while darker skin color per se does not have a direct relation to elevated blood pressure among black women, educational attainment, frequently used as a marker for socioeconomic status, is associated with elevated blood pressure (1993). Klag et al. similarly discovered significant differences in blood pressure among those dark-skinned blacks of varying socioeconomic standing ,[11] concluding that while "skin color is a marker for psychosocial stress in a race-conscious society" those who have achieved "success" have overcome this stress of limited resources (1991, p. 602).

Some interesting work has been undertaken on desire to improve socioeconomic status (s.e.s.), African-Americans, and blood pressure. Many of these studies conclude that those blacks who try hard to enhance their s.e.s. through an "active coping style" (usually extraordinarily hard work) but remain unsuccessful are likely to have a higher blood pressure (Klag et al., 1991).This pattern is frequently referred to as "John Henryism," after the famous folk legend of the hard driving "steel man" engaged in a battle of human against machine who eventually dropped dead of exhaustion. A strong correlation exists between "John Henryism," hypertension, and socioeconomic status (James et al., 1987).

Medical Discrimination

As Martin Luther King, Jr. proclaimed decades ago, "Of all the forms of inequality, injustice in health is the most shocking and most inhumane." Despite the relatively recent attention given to this issue, poor medical treatment based on racial prejudice has existed throughout African-American history. Reviewing U.S. medical history, Byrd and Clayton (1992) have found many instances of political posturing designed to defeat bills to improve black health status; physicians' espousal of racial inferiority, inhumane testing, and HCPs' assistance in creating a segregated health system, and, since 1975, a lack of commitment to establish culturally relevant, community-oriented health care. High infant mortality rates, greater morbidity, and lower life expectancy among African-Americans testify that persistent differences exist in providing equitable health care.

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[11] S.E.S. was defined in Klag et al. (1991) on the basis of occupation and education. Skin color was measured on the upper arm using a reflectometer.

Contemporary, quantitative studies provide further proof for medical discrimination (George, 1989; Shelley, 1992; Oddone et al., 1993; Elixhauser et al., 1994)). In these studies, blacks are routinely less likely than whites to undergo diagnostic examinations and to receive certain surgical procedures such as kidney transplants, coronary angiography, and carotid endarterectomies even after controlling for income and severity of condition. In addition, a recent study reveals that only 58% blacks compared to 82% of whites were given an antiretroviral medication, controlling for appropriateness of therapy, insurance type, age, sex, income and other factors (Moore et al., 1994). On the other hand, blacks are more likely than whites to receive hemodialysis treatment for kidney failure, amputations resulting from diabetic complications, and glaucoma treatment (Elixhauser et al., 1994). While there are legitimate biological differences among blacks and whites, the consistent findings of numerous researchers suggest either referral or treatment bias.

Many scholars have recommended that increasing the numbers of African-American HCPs could remedy this troubling situation and make the patient feel more comfortable, possibly resulting in improved preventive care and treatment adherence. Challenges to this remedy include inadequate resources on the part of black students to pursue a medical education, institutional discrimination, and patient reluctance to use minority practitioners (Hill, 1988).

Affordability of Medical Recommendations

Medical Costs

Health care expenditures continue to spiral upwards, comprising an ever increasing proportion of national productive and consumptive activities. In 1991, health expenditures for the United States rose to $751.8 billion, 11.4% over 1990 and constituting 13.2% of gross domestic product (GDP) (Letsch, 1993). This tremendous growth rate is four times greater than the overall GDP growth. Factors that account for such growth include medical price inflation, much greater than the nation's overall inflation level; tremendous medical price increases; demographic changes; increases in service utilization.

Public contributions to health-related expenses continue to grow. From 1979 to 1990, for instance, public funds contributed 42% of health financing, while in 1991 that percentage had increased to 44% (Letsch, 1993).[12] From 1967 to 1986, personal health spending rose by 333%. While an average person in 1967 spent $211 annually on health care, that same care cost $1837 in 1986 and $2868 in 1991 (Cockerham, 1986). The mean charge for an office visit to a physician's office continues to escalate from the 1930's cost of $3, to $21.29 in 1977, to $41.81 in 1983 (Stoeckle, 1987).

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[12] Letsch believes this increase is due to the expansion of Medicaid which, in response to greater program outreach to the poor and increased poverty due to recession has swelled Medicaid rolls. From 1990 to 1991, expansions in eligibility, has, for instance, increased Medicaid payments to hospitals by nearly 50% (1993).

Since older people tend to require more medical treatment, the proportion of household expenditures for health services usually increases with age. In the United States, household total average health expenses average $1629 (12% of household spending) and $1834 (17% of household spending), for those 65-74 and those over 75 years, respectively. Projected health care expenditures for the state of Florida are phenomenal; while statewide health care costs for 1993 amounted to $42 billion or $3109 per capita, in the year 2000 those figures will more than double to $90 billion and $5520, respectively (Almanac, 1994).

But can we conclude that all of the spiraling cost of medical treatment decreases the likelihood that people will follow their physician's treatment recommendations? As the next section indicates, availability of medical treatment for the study sample is probably not a major adherence determinant since all study members receive relatively extensive basic care treatment. However, it is important to study these issues because they affect a great proportion of the population and are significant to the fiscal health of the nation.

Economic considerations other than actual medical treatment, such as the possible costlier anti-hypertensive dietary recommendations, also may affect my study sample. Many of Hills' rural African-American informants in Georgia explained that they were unable to afford the "good" food they knew would enhance their health (1988). Unfortunately, my study participants were not asked about food stamps, a program that theoretically increases access to a greater variety of food. It may be argued that selecting fresh fruits and vegetables places more of a financial burden on an already resource-scarce household than the more typical diet of canned vegetables and fruits, starches and cheaper cuts of meats. Furthermore, preparing special meals to conform to dietary recommendations involves more time and ingredients, both of which place a greater burden on the household.

The cost of food may increase further if separate meals are prepared according to the dietary needs and wishes of family members. However, my study reveals that most people do not prepare and/or consume meals that differ from other family members'. Thus, while this issue may be germane to other samples, it need not be considered as a potential determinant among my sample.

Finally, transportation undoubtedly constitutes an economic determinant of health care access and adherence for study participants. With only half of my study sample owning a vehicle, many have to walk several miles to the supermarket or wait or even pay for a ride. Friends, neighbors, acquaintances or relatives offer rides to physician's offices for those who do not own a vehicle or do not drive; however, they are often costly. For example, a participant told me that to get a round trip ride to University City not only included waiting until the driver was ready to come home, but also cost between $15 and $30, depending on the demands of the driver. Walking to the supermarket conceivably requires selecting food on the basis of weight and bulk; thus, most of those who walk might minimize their fresh produce purchases. Furthermore, many informants explained that since they pay for rides to the market, they tend to go relatively infrequently and select less perishable foods such as starches and canned products. Thus, without the means to transport perishable and heavy food items, many of my sample forego the foods that their physicians recommend.

Enablers of Medical Care

Insurance

Health insurance coverage has spurred extensive debate across the nation, affecting election returns in the public realm and employment decisions among individuals. The estimated 35 million uninsured Americans (over 14% of the U.S. population) and at least that many underinsured have very limited access to many basic medical services (Ries, 1991). Those in rural areas with some insurance coverage, such as self-employed farmers, are more likely to be underinsured, relying on out of pocket payments for medical bills (AHCPR, 1994). Even among those with private health insurance, low income earners receive less financial support and contribute more to out of pocket expenses than other workers (AHCPR 1994).

As the following section on social programs indicates, my study sample and those over 65 in general tend to receive basic medical care due to Medicare. Approximately 12% of the civilian non-institutionalized sample or, 31 million persons, are covered by Medicare insurance. This amounts to coverage for 94.3% of those over 65 (Chulis et al., 1993). Ninety-one percent of older blacks received Medicare coverage, particularly important because only 44% carry private health insurance (Ries, 1991). Three and a half percent of older blacks receive Veteran's Administration benefits (Ries, 1991).

While most elderly receive Medicare coverage, the limited extent of Medicare-provided health services has resulted in 89% older Americans purchasing supplemental insurance One third of this private insurance is employer-based; 37% have individually purchased coverage; 5% have a combination of employee and purchased plans; 12% have Medicaid supplements; and 2% have "other" policies. Thus, only 11% in the general population rely solely on Medicare (Chulis et al., 1993).

Twenty-seven percent (11 people) of the study sample rely solely on Medicare for health care coverage. As Figure 6-2 illustrates, many of the participants employ a wide range of medical care coverage in addition to Medicare.

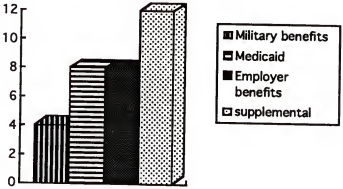

Figure 6-2: Study participant health insurance coverage (in addition to Medicare).

Social Programs

To address this issue of increasing resource availability for the poor and the elderly, the United States government has created a number of social programs. Programs like Social Security[13] and Supplemental Security Income

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[13] Social Security, created in 1935 in response to the devastating economic effects of the Great Depression, paid out more than $200 billion to more than thirty-eight million individuals in 1987. Basically, Social Security, financed by taxes on workers and employers, pays benefits to workers and their dependents and survivors (Brown, 1989). Though nine out of ten workers are covered by Social Security, the types of employment many of my

(S.S.I.)[14] try to ensure a minimal level of living standards and, by establishing neighborhood health centers, Medicare, and Medicaid attempt to facilitate assess to health care.

The United States' government also attempts to address rural/urban health facility disparities through such programs as Neighborhood Health Centers, the Rural Health Initiative to consolidate previous health programs, and Emergency Medical Service and the National Health Service Corps . This latter program, for example, offers scholarships to all medical students willing to practice in rural areas. According to Frenzen, however, many physicians have continued to move out to rural areas because of perceived or real increased competition among physicians and the desire for a more rural lifestyle (1991). DeFriese and Ricketts cite an article claiming that nearly every town of 2500 or more had an active physician in 1979 (1989). In addition, even if communities do not have their own physician, they estimate that 96% of rural people have a physician living within 15 miles (DeFriese and Ricketts, 1989).

Available to those 65 and older, Medicare primarily assists the elderly with acute care and physician services, but does little to provide chronic and long term care or help with prescriptions or other daily living expenses.

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informants held (such as in the informal economy , part-time workers, or sharecroppers) did not have their payments deducted from their salaries. Many believed they would be eligible for benefits only to discover that their employer never withheld the tax.

[14] S.S.I., a program relevant for many of my informants but unknown to most, assists elderly, blind, and /or disabled who have few assets and almost no income. A federally administered program, S.S.I. allots $354 for individuals and $532 for couples monthly to those whose income does not exceed these amounts and whose resources do not exceed $1900 and $2850, respectively (Brown, 1989). Recipients may simultaneously receive Social Security, food stamps, Medicare and Medicaid.

Medicaid, available to the extremely indigent, helps with a more inclusive variety of medical services including paying for medication, but because it is co-administered between the state and federal governments, eligibility and benefits vary extensively. Since the state decides a person's eligibility according to its tax base, poorer or less taxed states offer fewer people less care (Starr, 1982; Brown, 1989).

Created in 1965 to address elderly's health concerns, Medicare has been described as changing a downtrodden disenfranchised underclass into a politically powerful constituency (Sidel, 1984). Support for Medicare comes from all societal sectors for a variety of reasons. Ideologically, most taxpayers recognize the growth of the older population, the aged's increased need for medical attention, and elders' inability to pay for care due to spiraling health care costs. Such increased costs and service utilization amounted to an annual average of $4,564 for each older person's medical expenses, as opposed to $1386 for those under 65 (Hahn and Lefkowitz, 1992). Political support for Medicare is also widespread because of the increased volume of the elderly's collective voice and because of the moral implications of denying the elderly medical care.[15] Finally, physicians and the health insurance and "care industries" have profited richly from Medicare. Despite the AMA's initial reluctance to accept anything that looked like it might impinge on medical autonomy, physicians eventually realized that more frequent office visits and relatively generous payment ceilings would meant increased profits (Starr, 1982). In addition, during the mid-1980s , for example, hospitals made 14-15% profit on Medicare payments, despite the enactment of "a monitoring system"

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[15] The poor, on the other hand, are more likely to be perceived as irresponsible and better able to somehow provide their own health care (Sidel, 1982).

(Sorian, 1988). As Sorian notes, "Medicare had fed a voracious appetite in America's hospitals, nursing homes, and doctors' offices"(1988, p. 89).

Despite this enormous expenditure, evaluations of Medicare remain mixed. On the positive side, Medicare has addressed some basic health care needs for nearly 35 million subscribers, contributing to $120.2 billion in benefits (Letsch, 1993). Medicare users had the highest total health care expenses of any group, spending almost twice as much as those in the 45-64 year old group, and 3.5 times as much as those in the 18-44 year old category. Medicare paid almost half of such expenses (Hahn and Lefkowitz, 1992). Furthermore, eligibility is very generous-anyone over the age of 65 and receiving Social Security or Railroad Retirement benefits or who has paid into the system,[16] many disabled, and those on dialysis with renal disease are entitled to participate in Medicare (Brown, 1989). Part A of the program provides hospital insurance while part B covers other health-related expenses such as physician office visits, diagnostic examinations and medical equipment usage. Part B, however, is optional and involves enrolling and paying a monthly premium, often automatically deducted from one's social security check. But, according to Blendon et al. who tallied the mean number of physician visits made annually by the poor elderly, because of almost universal coverage under Medicare, nearly all elderly now have similar health care availability (1986). The only exception are many of those in the rural areas (Dwyer, Coward, and Lee, 1990; Jecker and Berg, 1992).

There are many, however, who feel that the administrative and procedural complications that reduce understanding and properly using the system render Medicare relatively ineffective (Brown, 1989). Critics of Medicare point to the constant and real threat of budget cutbacks that contribute to rising co-payments, premiums and deductibles, and declining services coverage. In fact, Medicare covered only 48% of the mean annual medical expenses of those over 65; 21% of expenses were paid out of pocket, 16% by private insurance, and 14% by other public programs (Hahn and Lefkowitz, 1992). Medically-related items important to the elderly but not covered under Medicare include most long term care, eyeglasses and eye tests, routine physical examinations, hearing aids, custodial care, dental services and prescription medications (Brown, 1989). Finally, Medicare detractors claim that the program lacks cost effectiveness, pointing out that prior to its inception, the elderly spent a lower proportion of their income on medical expense than they do currently. However, as the previously section indicates, medical expenses have skyrocketed since 1965 so it is logical that significantly more money goes to cover such costs.

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[16] Anyone who is ineligible for Social Security or a Railroad Retirement pension may purchase Medicare coverage by paying, in 1988, $234 per month (Brown, 1989).

Medicaid, reportedly "created as an afterthought to Medicare," (Sorian, 1988) and "initially of secondary importance" to Medicare (Cohen et al., 1994), has been responsible for increasing accessibility to services, resulting in a wider range of health care services and health-related spending opportunities. Medicaid fulfills a particularly important role for elderly indigent Medicare recipients, 14% of whom are qualified to receive Medicaid (Letsch, 1993). Depending on the state, coverage can be partial (paying for Medicare premiums, deductibles, and co-payments) or complete (providing full coverage) (Chulis et al., 1993).

Medicaid has unquestionably enhanced medical access for the poor,[17] Medicaid pays for routine check-ups, hospital care, as well as an average of 41% of prescription medication (Hahn and Lefkowitz, 1992). As one of the largest categories of expenditures many states make, Medicaid costs totaled $65 billion in 1990 (57% federal expenditure and 43% state) accounting for 11% of health care expenses (Cohen et al., 1994). These considerable expenditures result in a greater dollar allotment of services to the poor than to the rich. For instance, those with low incomes use an annual average of $2291 compared to $1643 for higher income individuals[18] in health-related care. Sixty-three percent of the poor's medical expenses are paid for by public programs as opposed to 17% of the rich's medical services. While the poorest pay 16% of their medical expenses out of pocket, the richest reach into their wallets for 27% of their medical expenses (Hahn and Lefkowitz, 1992).

While the aforementioned figures reveals increased availability of health care for the poor, Medicaid has been criticized by various ideological camps. Those desiring to greatly increase the availability of medical care to the poor complain that Medicaid is compromised by inadequate financing (only half of the poor receive any coverage and only one-fourth are covered for the entire year) and health care professionals' unwillingness to accept patients using the program (Cohen et al., 1994). Twenty percent of physicians refuse to see any Medicaid patients at all, while 6% of physicians see one-third of all Medicaid patients. In addition, Medicaid patients are twice as likely to be denied care as the uninsured and have four times the rejection rate of those covered by private insurance (Saver and Peterfreund, 1993). Physician refusal to treat Medicaid patients results from the lower compensation and additional paperwork necessary for Medicaid compensation (Sidel, 1984). Cohen et al. discovered that paying physicians an additional 10% results in 1.5% increase in a Medicaid patient's likelihood of having an office-based doctor for customary care (1994).

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[17] 22.5 million Americans, or 9.3% of the non-institutionalized population were covered by Medicaid over some portion of the year 1993. Women were more likely to be covered than men (11% versus 7.4%); blacks more likely than Hispanics or whites (27.8% versus 21% and 5%); children more likely than adults (21% of those under 12; 7.8% for those 65-74 and 11.5% for those over 75)(Cohen et al., 1994).

[18] Poor in this study refers to those living at or below the federal poverty level while rich or high income indicates those living at above 400 percent of poverty level.

Secondly, since states determine their recipients' eligibility levels according to taxes revenues, significant differences in health care expenditures exist among states. Finally, proponents of conservative fiscal policies question the cost effectiveness of Medicaid; from a starting price of three billion dollars in 1965 to $18.8 billion by 1982 (Starr, 1982).

Despite these gaps in services and astronomical costs, these programs have undoubtedly begun to afford better access to health care facilities for the needy (Goering and Coe, 1970; Rundall and Wheeler, 1979; Crandall and Duncan, 1981; Sidel, 1984). [19] For example, in 1965, the poor saw physicians 20% less often that the non poor, but by 1975, the poor made 18% more physician visits. Currently, those families earning under $10,000 annually make 6.6 physician visits as opposed to 5.4 visits by families earning over $35,000. Part of this disproportionate increase in physician visits is due to the higher morbidity rate among poorer people (Kovner 1990). In 1963, people with incomes of $7500 or over were twice as likely to undergo surgery; by 1970, the poor's rate of surgery had increased by 40% (Starr, 1982).

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[19] It should be remembered, however, that the above figures relate to poor who are eligible for governmental services like Medicaid and Medicare. There is a large and expanding segment of the population, known as "the working poor" who exceed eligibility status but whose employment and/or income does not provide health insurance. Such individuals are more likely to do without physician visits despite their enhanced need; insured individuals make 3.7 ambulatory visits per year while the uninsured make only 2.4 annual visits These individuals are generally within 125% of the federal guidelines for the poverty level and fall into two classes, the perpetually uninsured (eighteen million persons annually) and the partially uninsured (sixteen million individuals annually). Blacks and other minorities, Southerners, and service and agricultural workers are at highest risk for being uninsured (Davis and Rowland, 1989).

More equal access to services is both economically and racially- based. Despite their greater poverty and many instances of medical discrimination, blacks received more health care than other ethnic groups. (Mutchler and Burr, 1991)[20] In 1991, the mean per capita health service expenditure for Hispanics, whites, and blacks was $1270, $1808, and $2121, respectively. Furthermore, blacks spend considerably more on the average doctor's visits: annual costs total $567, compared to $361 for Hispanics and $466 for whites (Hahn and Lefkowitz, 1992). Differences in the percentage of blacks and whites visiting physicians' offices are insignificant; in 1986, 74.6% of whites and 73% of blacks saw a doctor compared to 67% and 57%, respectively in 1964 (Kovner, 1990). Elderly blacks use as much medical care as elderly whites, with 47% of older blacks having monthly checks-ups, 11% weekly, 15% every third month, and 11% "whenever doctor says" (Jackson, 1981). Despite this undeniable increased access to health care services, when one considers the greater level of illness among the poor, it is unlikely that all of the poor's needs are met. Simply comparing numbers of physician visits can be misleading, therefore, because lower income people experience more health problems. Furthermore, policy changes in the 1980s had the effect of reducing medical services for many low income individuals. Between 1982 and 1986, for instance, low income elderly made 20% fewer ambulatory care visits because of decreased program funding (Kovner, 1990).

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[20] Lefkowitz and Hahn indicate that the rich spend less for health care and pay more out of their pockets than the poor. In 1987, 76% of all health expenditures were financed by third party payers and 24% was paid out of pocket (1992)

Study Sample's Access to Health Care Professionals

The study sample's proximity to medical institutions has undoubtedly increased their health care availability. In the county, there are three major hospitals, of which the university teaching hospital is the largest private employer (Almanac, 1994). Five of the top ten major employers in the county are hospitals or health related enterprises (Almanac, 1994). With 1546 physicians-not to mention the thousands of other health care professionals-in a county of 120,000 individuals, the sample has the potential of being well-served. The fact that 73% of my study sample has a friend or relative who is employed in the medical community testifies to HCP accessibility.

The combination of numerous HCPs, many personally familiar with the individuals, and well-staffed public health centers in the community, has the effect of offering relatively open access to the medical community. Everyone in my study sample made at least a yearly visit to a physician's office or to the public health clinic. However, since approximately a third of my informants were recruited through the public health clinic (PHC), it is likely that my study sample demonstrate a willingness and ability to participate in the mainstream medical community. Still, with a mean of five annual HCP visits, it is difficult to argue lack of medical care accessibility.

While much of the literature suggests that having a private, personal physician can be a key enhancer of adherence, my research indicates little advantage to maintaining a relationship to a private physician. First, there is no statistically significant correlation between household income and public versus private physician source nor between the number of annual visits and the source (public versus private) of that care. Secondly, though again statistically insignificant, those participants with private physicians (24 individuals or 59%) tend to make fewer visits to the doctor than those who use health clinics. Several people mention that they stop by the PHC monthly just to "check up on the pressure." Very few of my informants indicate that medical consultations are difficult to obtain or inaccessible.[21] The annual number of visits to a medical office has no statistical relation to income, indicating that access to services is independent of financial concerns.

The H public health clinic, located in the center of the "downtown" and lowest income area, is open five days a week and late on Wednesdays. While nurses and nurse practitioners see most of the patients, a physician from University City sees patients three days a week. Most of the half of my informants who use the clinic as their primary care source believed it provides comprehensive services, a reasonable waiting period, and that the staff spends enough time performing check-ups and relaying information. Those who chose to go to a physician outside of H usually went to University City, a thirty to forty-five minute drive and usually did not complain about the distance, wait, or inadequate attention. As my data reveal, all but one informant seemed to be quite satisfied with their medical care, contradicting much of the literature on rural health facilities' inadequacies.

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[21] The notable exception was the informant who used the Veteran's administration as his primary physician. He described office visits as very difficult to obtain and equally difficult to maneuver once he arrived at the hospital due to extensive waits.

Aside from gender and education, there are no associations between accessibility to medical services (defined as the number of HCP visits) and sociodemographic variables. Women tend to make slightly more visits to HCPs (40% of women and 25% of men make five or more visits), as do those with a secondary school education (64% of those with a secondary school education make five or more visits, as opposed to 7% and 29% for those with primary and middle education, respectively). Furthermore, adherence level does not appear to be correlated with study participants' number of physician visits.

Access to Care Versus Utilization

There is a considerable amount of debate as to who or what is to blame for peoples' failure to achieve good health. Feinstein conceptualizes this debate into four distinct "boxes" interlinked and possibly each contributory to health outcomes. These "boxes" or categories include: underlying personal characteristics involving a)resource-dependent attributes like wealth and b)non-resource dependent characteristics such as cultural, psychological, and genetic factors including, for instance, the "culture of poverty" and what Feinstein describes as "the stage of life experience in which inequalities are generated" involving a) differential experiences during the life span such as differing dietary practices and b) differential access to and usage of health services or structural barriers (1993, p. 280). Though the author admits this model fails to appreciate deep structural relationships, he nevertheless believes in the comprehensiveness of such a categorization.

As discussed in Chapter 4, culture of poverty advocates emphasize the "who" in health status differences, or the poor themselves, entrenched in a way of life and culture that creates social, economic, and psychological traits antithetical to good health. Those who blame the "what" for health status differentials generally find fault with the financial and structural aspects of the medical care system. Beginning in the 1960s and 1970s and more recently including the "culture of medicine" critique, social program advocates cite such material obstacles as impeding poor individuals from achieving a healthy life. Such "structuralists" believe that only through enhanced access to such institutions as medical centers and physicians' offices will low income individuals' health be comparable to the population at large. Other more integrative, multifactoral perspectives account for behavioral tendencies as well as access differentials (Berki and Kobashigawa, 1976; Crandall and Duncan, 1981).

Such researchers began to notice that while government programs offered the poor greater opportunities for health care, low income remains associated with lower health status (Goering and Coe, 1970; Dutton, 1978; Crandall and Duncan, 1981; Feinstein, 1993). For example, Berkanovic and Reeder (1974) note that only 14% of the variance in medical care usage by the poor is due to cost. Only 10% of low income individuals cite money as the reason for not pursuing health care.

What, then, would account for the seemingly contradictory combination of improved availability to health services and continued poor health? Dutton (1978) and various other researchers answered this question by proposing that income directly does not necessarily determine health behaviors (Rundall and Wheeler, 1979; Crandall and Duncan, 1981). Rather, associated with low income and probably more problematic than inability to pay for health services were health-related expenditures, such as the additional costs of separate meal preparation, and the poor's experience with low income health care (Harel, 1990). One analysis of the Alameda County project, for example, revealed that residence in a poverty area was a more influential factor than any sociodemographic variable in determining mortality rate (Feinstein, 1993).

Researchers investigating the rural elderly's access to services often conclude that numerous barriers prevent service use even if adequate health care facilities seem to be available (Barney and Neukom, 1979) These barriers include lack of information regarding programs, rigid program eligibility requirements, agencies' administrative practices, long distances and inadequate transportation (Dwyer, Lee, and Coward, 1990). This latter obstacle has been described as the "most formidable obstacle to the development of programs in rural areas" (Parkinson, 1981, p. 227). In rural areas, bad weather, inadequate public transportation, and demands for high payments for transportation can impede rural elderly's access to health facilities

Summary

The recent national discussion concerning health reform testifies to the insufficient quantity and quality of health care. The debate has been spurred on by escalating medical costs, changing demographic trends, and insecure or absent coverage for all classes of people. Such medical costs and insufficient coverage amplify the financial health crisis the nation faces. Poverty, particularly endemic in the rural portions of the United States and among minorities, places an additional burden on those directly affected as well as the fiscal health of the nation.

It is well-documented that poorer individuals do not enjoy as healthy lives as richer people, though researchers are far from reaching a unified explanation for this phenomenon. African-Americans face not only lower economic status, fewer health care benefits and more hazardous employment but also encounter medical discrimination.

My study sample, however, has undoubtedly benefited from social programs such as Medicare and Medicaid. In conjunction with other "gap" insurance and pensions, most participants visit their physician frequently, particularly women and more educated people. They also enjoy greater medical care access because of the health care service sector's overwhelming presence within the community. Thus, these material conditions, favorable to satisfactory care, probably minimize availability of health care as a determinant of adherence. But what remains undetermined is the relative influence of each of Feinstein's boxes, or the who, what, and why of economic access. Economic barriers to dietary adherence may involve other factors generally overlooked by researchers and extremely difficult to detect, such as food costs and some non-materialistic influences discussed by culture of poverty advocates.

CHAPTER 7
PATIENT-PRACTITIONER RELATIONS

"The patient, though conscious that his condition is perilous, may recover his health simply through his contentment with the goodness of the physician." (Hippocrates as quoted in Meichenbaum and Turk, 1987)

> Certain practitioners are graced with athquniya, the 'gift' or 'touch'. This means that a practitioner is not only disposed toward healing, but due to his or her kindness, compassion, and gift for healing, is better able to help patients. The Sinhalese say that if the same medication is given by two different practitioner, one with athquniya and one without, the medicine will 'answer' more successfully for the former. (Nordstrom, 1989, pp. 51-2).
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> Mother Jones's (a renown Jamaican balm practitioner and healer) characteristic optimism is encouraging to patients and raises their expectations for relief. Her sensitivity to the affective needs of others-that is, her warmth and concern-evokes feelings of love and security in her patients and allows her to establish rapport with a patient quickly. She is a very creative and intuitive person and can easily make convincing interpretations of a case on the basis of a few clues. (Wedenoja,1989, pp. 85-6).

Throughout time and various cultural traditions, observers have recognized the primacy of the patient-physician relationship. In most cultures, mothers, wives, and various other females kin are responsible for general household health maintenance,[1] yet the family calls in outside health specialists for restoration and re-equilibrium of well-being (Dougherty,

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[1] According to Finke (as cited in Meichenbaum and Turk, 1987) such household healers cure 90% of all health problems at home.

1976; Hill, 1976; Watson, 1984; Randall-David, 1985). The healer, curandero, shaman, physician, etc. generally takes on tasks out of household members' ken; activities requiring special knowledge of complex biological malfunctions and/or divine interventions. The healer is usually afforded high esteem; however, almost all cultures recognize that health maintenance and restoration is, at minimum, a two party relationship. This patient-practitioner interaction and its importance to the healing process is the focus of this chapter.[2]

Healing Specialists

Cross-cultural investigations reveal that most cultures generally afford high status to those who heal. Ojibwa shaman can resist death (Hallowell, 1955) while Guarani shaman comfortably retire to the dangerous forests where they receive "celestial food" (Metraux, 1948). Doctors, shaman, curanderos and others are often thought to hold supernatural powers, using their skills and expertise both for the common good of the people (Metraux, 1948) or with evil intent. (Goldman, 1963). Describing a Manitou Rapids Ojibwa community, Ruth Landes notes that

> People cower physically before (the shaman), shrink away, hush their talk, straighten their faces lest the shaman suspect some offense in their behavior. Once a girl and her mother were walking along a road and passed close to where a shaman lay dozing in the grass. They were joking and talking. Yet because of their laughter the shaman became furious and muttered, "I'll get you! I'll get you!" and the woman soon showed the effects of the evil medicine; her mouth became "twisted" and she became incontinent of urine. Paralysis, incontinence, twisted mouth, and the windigo insanity are sent by

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[2] As in this dissertation in general, I have limited my focus to the physician as the main practitioner since my study population invariably spoke of their doctors as their main source of health care.

> shaman who have been offended by casual behavior. (Landes as sited in Hallowell, 1955, pp. 113-114)

While to many in contemporary Western societies these descriptions of curers may seem grandiose and contrary to a "do no harm" credo, examples of similarly reverent attitudes toward biomedical physicians are plentiful. While many Chinese physicians receive no payment unless the patient believes him/herself cured, most Western physicians do not expect to be bothered with the financial implications of treatment, even if a procedure is likely to result in patient insolvency (Stoeckle, 1987). Patients cower with fear over physician disapproval, many obscuring the truth or outright lying to make themselves appear to understand instructions or to be adherent (Bernard, 1988). Seldom do patients believe themselves equal enough to their physicians to call them by the first name, though the doctor might call patients by such an informal type of address.

Studying Patient/Physician Relations

While most literature cites four major determinants of adherence (patient characteristics, treatment characteristics, clinical settings and patient-practitioner relations), only recently has doctor/patient interaction become a major focus of critical investigations. Stoeckle posits that this relationship has been researched more than any other private realm "dyadic encounter"- including lawyers and clients and husbands and wives (1987). During the past three decades, such research has burgeoned for many reasons, among these a demystification and "de-deification" of the medical profession and a sense that the physician may be somewhat responsible for creating, or at least not removing, barriers to health maintenance and restoration. Such criticism does not entirely blame the physician for his or her patients' compromised health status, but submits that an unequal relationship between dominant doctors and their submissive patients fosters nonadherence and poorer health outcomes.

Not only have status differentials affected the physician-patient relationship, but research itself has often been obstructed by such considerations of social standing and credentials. Garrity notes that past researchers typically tended to attribute inadequacies of the patient-practitioner relationship to the patient's shortcomings rather than to the physician. In addition, he reports that considerable difficulty exists in "monitoring the encounter" due to an ethical veil of confidentiality and the avoidance of studying ones intellectual peers (Garrity, 1981,p. 215). Furthermore, measurement of the encounter is rife with inconsistencies and bias (German 1988; Clark 1991).

Stoeckle (1987) speculates that social scientists have also become increasingly interested in the field of study, adopting a patient's perspective for two main reasons. First, he notes, to counter the one-sidedness of physicians' records of their interactions with patients, social scientists wish to give voice to "the underdog." Additionally, as the next section discusses, social scientists attempt to learn which types of interactions are most likely to promote better health through constructive dialogues.

The Patient-Physician Relationship's Relevance to Adherence

Most research indicates that a good physician-patient relationship enhances the patient's ability and willingness to follow treatment recommendations (Bartlett et al., 1984; Roter, 1984; Morisky, 1986; Orth et al., 1987; Stoeckle, 1987; Moore, 1988; Kaplan et al., 1989; Shea et al., 1992). Such statements as "the relationship between the patient and the health care practitioner can be the key factor in adherence" (Francis, 1991, p. 1A-34S) and "poor relations between the physician and patient may be the single most important impediment to effective adherence treatment" (Clark, 1991, p.666) illustrate scholarly perspectives on the importance of this interaction. The primary place of the physician in healing is similarly illustrated by the frequency of visits people make to doctors each year. In the 1980s, patients made an average of one billion office visits annually, with physicians attending to an additional 400 hospital patients (Stoeckle, 1987).

Merely having a consistent and personal physician may contribute to adherence. A study conducted by Shea et al. (1992) of a minority inner city sample revealed that having high blood pressure checked in an emergency room, lacking a primary care physician, and receiving sporadic emergency room prescriptions are the three most predictive factors in hypertension treatment nonadherence. Those treated in emergency rooms generally did not regularly see a physician, leading to irregular blood pressure check-ups and emergency room-prescribed medication. Among my study sample, however, the source of care (public versus private medical office) had no effect on the number of physician visits patients made. Furthermore, the use of public or private facilities had minimal impact of adherence. The continuity of care and accessibility offered by the H public health clinic possibly enhanced my study participants' level of adherence and returning for appointments: most of the staff and visiting nurses had worked at the clinic for many years and, living in the community, knew many the patients well. In addition, while the current physician had been seeing patients for little over a year, her predecessor worked in the clinic for seven years.

Even in communities thought to be resistant to biomedical approaches, the Western physician has become a primary actor in health problem solving. For example, 93% of Randall-David's sample of rural southern African-American respondents cited the physician as the sole person to whom they would send a friend with high blood pressure (1985). All but one of my participants similarly indicated that his or her physician is effective and his/her treatment appropriate. While they are not generally viewed as miracle workers or having supernatural powers, many of my sample viewed physicians as the tools of God, noting that God works through them. As one older woman noted, "follow your doctor, follow your prescriptions, and follow the Lord."

Physicians are important to the patient's positive health behaviors and well-being for many reasons, including the doctor's role in social support as the legitimizer of pain and illness or purveyor of certainty or factual reassurance; provider of self-efficacy; and primary disseminator of information.

In an address written to the American Medical Association in 1927, Frances Peabody highlighted the importance of social support in healing the sick. Peabody noted, "The treatment of a disease may be entirely impersonal; the care of a patient must be completely personal," and "One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient" (in Stoeckle, 1987, pp. 389 & 401).

In her study of the medical narrative, Hunter theorizes that individuals seek out comfort and reassurance from the physician who is perceived by society as uniquely capable of legitimizing illness or, as Morisky et al. describe it, as the representative of "the science of medicine." (1986) The physician essentially translates the patient's narrative or story of his/her problem into "scientific" lingo, enhancing the credibility of the illness and often giving a name and treatment strategy to the story. Sick individuals rely on this translation process in order to bring the story to a happy ending. The physician is the best person to legitimize the illness because society sanctions his or her expertise. Kaplan et al. also describe patient-practitioner interaction as "a primary bond that may act as a form of social support to influence the patient's health status." (1989, p. S125) Furthermore, a recommendation from a legitimate "power source" enhances an individual's sense of self-efficacy.

Finally, and probably most importantly, the doctor, from the Latin "docere" meaning "to teach," provides a significant amount of information to patients (Meichenbaum and Turk, 1987; DiMatteo et al., 1993). Randall-David's study of a community similar to my study sample concluded that the majority of people, even those most involved with folk remedies, relied on their physician for the bulk of their health information. Seventy-two percent of those over 60 years of age claimed they get information from their physician (1985). Among my sample, everyone agreed that they received information from their physician, and 52% claimed their doctor as their main health information source. The next most common response was "other" (namely "just picked it up over the years, etc."), chosen by only 15% of the sample. The type of physician seen (public versus private) is strongly associated with information source: 42% of those visiting private physicians chose their doctor as their main health resource, while 10% of those visiting a doctor at the health clinic said the same. Of those who derived the majority of their health knowledge from "other" sources (mainly common sense or "just picking it up"), only 5% feel the doctor's information is sufficient. For study participants who state they receive the majority of their health information from their physician or nurse, 76% agree or strongly agree that the doctor provides adequate information.

Some studies, however, indicate that physicians inadequately perform this essential role of information provider (Kaplan et al., 1989; Clark, 1991; DiMatteo et al., 1993). One study reveals that a sample of physicians spent one minute out of the average 20 minute office visit providing information. When queried, these physicians believed they spent one-quarter to one-half of the visit giving information (Meichenbaum and Turk, 1987). Some researchers fault medical school training for inadequately preparing future physicians to be sensitive to people's needs for relevant and comprehensible information (Meichenbaum and Turk, 1987).

Still other investigations provide evidence of a mutually satisfying relationship (Woolley et al., 1978; Bartlett et al., 1984). Roter's study, for example, recorded the level of participation in conversation, as measured in the number of words spoken, discovering a relatively equal contribution. Fifty-seven percent and 43% of words were uttered by the doctor and the patient, respectively (1984). My study sample acknowledges this mutuality; the great majority of my sample either agreed or strongly agreed with the statements "my doctor provides enough information"(69%), "I am satisfied with the talks I have with my doctor"(80%), "I feel the doctor and I get what we each want out of our talks"(83%),"the doctor seems to understand my questions and concerns"(85%), "I feel like I can talk about anything with my doctor"(88%), "we tend to talk about things I'm interested in"(88%), "the conversation between us usually goes smoothly." (95%)

On the other hand, it is difficult to discern whether most patients are satisfied or merely not expressing their dissatisfaction and whether this satisfaction has an impact on the decision to follow health recommendations.

Only one of my study participants, for example, expressed the belief that her physician could be doing more to improve her health, or as she said, "seem like he could try to do something else." The remaining 40 participants feel their physician "is doing the right thing for their treatment." One study, however, reveals that 60-70% of dissatisfied patients fail to complain to their health care practitioner even if they feel that they are receiving inadequate care, due to a fear of poor treatment retribution or to a sense of futility (Stoeckle, 1987).

The Structure and Nature of Physician Visits

Researchers propose that the office visit, where 60% of all patient contacts with physicians occur, is also a major determinant of an individual's satisfaction with his or her medical care (Stoeckle, 1987). Even before the patient arrives at the clinic or office, he or she may be deterred by a long waiting period for an appointment. It is estimated that most people wait an average of a week before they can visit a doctor for non emergency treatment and two weeks for a preventive care appointment (Stoeckle, 1987). Waiting times for appointments vary according to sociodemographic factors; adults wait longer than children; women longer than men (7.8 days versus 5.9 days); blacks longer than whites (7.2 days versus 5.3 days). Most of my study participants, however, note that delayed appointments are not problematic because they tend to arrange their next visit at the end of their appointment.

While traveling a great distance to the doctor's office might detract from some individual's enthusiasm for their medical care, travel time and distance among my sample is statistically not associated with dietary nonadherence, satisfaction with the physician, and the perception that the doctor spends sufficient time with the patient. My data reveal that few other variables related to the structure of the physician appointment, such as waiting, have any effect on adherence level or even on the level of patient satisfaction with his or her physician.

Once in the office, studies indicate that the average patient waits to see the HCP for 27.9 minutes, except if he or she is in the emergency ward where a wait averages 40 minutes. Blacks wait an average of 39.4 minutes while whites are seen within 28.4 minutes. These time differences are probably due to differences in type of health care facility used (Stoeckle, 1987). Waiting time differences among my study sample are extensive (with a mean of 40.5 minutes) and are not statistically correlated with private/public facility use. The longest wait occurred at the Veteran's Administration (240 minutes) and the briefest at the town public health clinic (5 minutes).

Despite a lengthy wait, physician/patient consultations tend to last only a few minutes. Though most physician visits are brief, particularly in light of the lengthy waiting time, United States patients are fortunate when compared to Japanese patients who wait three hours for an appointment typically lasting three minutes (Stoeckle, 1987). Perhaps the patient/physician ratio can explain such national differences in waiting periods. General practitioners attend to an average of 35 patients daily in the United States as opposed to 100 patients for each Japanese doctor. The average United States patient spends twelve minutes in consultation with a physician.

It is interesting to note that the number of minutes a study participant estimates he or she spends talking with the physician varies according to travel distance, with those closer spending less time than those using a physician farther away. For instance, while 75% of "close" patients (all of whom used the H public health clinic) spent below the mean of 13 minutes chatting with their doctor, only 47% and 60% of medium and farther distance travelers (all of whom saw either private doctors or, in one case, used the Veteran's Administration) , respectively, spent less than the average.

The perception of consultation duration also varies with distance traveled; those study participants who travel more miles to their doctor's appointments believe that their physician spends a more acceptable amount of time with them. Seventy percent of the "far" group, as opposed to 50% of the close and 47% of the medium, agreed that the amount of time chatting with their doctor is satisfactory.

Most people in my study sample feel that the amount of time they spend with their physician is adequate. Furthermore, those who feel their physician spends sufficient time with them are more likely to feel satisfied with their relationship with the doctor (p=.008, g=-.645). Interestingly, however, there is no statistical correlation between the number of minutes spent talking with the physician and adherence level. This is not entirely surprising since adherence is not correlated with a satisfactory patient-physician relationship among my study participants. While most studies positively correlate patient satisfaction and adherence, my sample's near unanimous satisfaction with their doctors may signal an appreciation for the access to care rather than the "success" of treatment.

Physicians' Characteristics

With 527,900 medical doctors in the United States, including osteopaths, it is not surprising that personality characteristics vary widely among physicians (Stoeckle, 1987). Like medication trials, researchers continually attempt to standardize effective physician behavior, under the assumption that if people believe and like their doctor, they will be more inclined to listen to instructions, recall information, follow recommendations and, conceivably, have better health outcomes. Variables investigated typically include the character and content of communication, style of interaction (i.e. authoritarian versus partnership) and affectivity, amount of attention given to the patient and, finally, personal features, such as ethnicity of the physician and patient. Because I interviewed only a few physicians, I felt unable to assess the influence of their varying personality attributes. However, the patient-practitioner communication evaluation instrument evaluated each participant's overall satisfaction with his/her physician.

Communication

Svarstad (1974) reveals that physicians tend to vary the amount and expression of information depending on the patient, tending to give less explicit instructions to women, Spanish-speakers, and those with previous illnesses. On the other hand, the patient's age, educational level, and number of people present in the waiting room had little impact on physician explicitness.

Various researchers contend that physicians must balance the complexity and amount of information they provide to patients. Garrity (1981) notes that patients have diminished recall when given a large number of sentences at one time; however, most patients do seem to appreciate when their practitioner provides them with plentiful information. One study shows that even if the individual did not understand much of the discussion, s/he felt the doctor was more concerned if more information was given (Francis, 1987). Roter's investigation of the patient-physician dialogue confirms Francis' finding; the more that a physician says, the higher the patient's satisfaction with both the doctor and the care (1984). Furthermore, Orth et al. discovered that greater "physician exposition" (more inclusive and elaborate medical explanations) actually decreased blood pressure during physicians' home visits (1991). Information should be conveyed clearly, however as most individuals do not appreciate technical jargon (Bartlett, 1981; DiMatteo et al., 1993). Finally, Ley documents the positive correlation between clearly written instructions for a psychoactive medication regimen, recall, and adherence to such recommendations (1979).

Good communication facilitates treatment adherence due to both actual information transfer and perception of concern.[3] One study reveals that patients who recalled their health care practitioners' advice were three times as likely to make no errors in adherence than those without such recall (Morisky, 1986). Despite this finding, several studies reveal that the actual content or equality of communication is less important than the expectations a patient has of the dialogue (Ley, 1979). A discordance of expectations, according to Garrity, will be almost always result in treatment nonadherence. Conversely, those seeking and receiving lots of interaction and those who do not desire and do not receive much information and interaction were the most satisfied and likely to follow treatment recommendations.

Style of Interaction

Such mutuality of expectations has best been described in Szasz and Hollender's tripartite classification of patient-practitioner relations. In an "activity/passivity" relationship the physician takes complete responsibility for the patient's well-being without any expectation of patient participation, such as when someone is in a coma. The "guidance cooperation interaction" in which the physician gives advice that the patient is expected to faithfully follow is similar to Parson's sick role theory. Both parties share complementary expectations, but the health care professional gives the orders and the sick person obeys without question, as in the case of an acute infection (Meichenbaum and Turk, 1987). Finally, in the "mutual participation-type relationship" the parties are assigned equal responsibilities in the maintenance and restoration of health. In chronic disease management, those with "active patient orientations" tend to achieve better blood pressure control (Garrity, 1981, p. 219).

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[3] Conversely, various researchers have concluded that "poor communication between patient and physician may be the single most important impediment to effective adherence to treatment " (Clark, 1991, p. 666) .

To many patients, being involved in a medical partnership indicates the physician's respect and concern, and is likely to have a positive effect on adherence. The study undertaken by Orth et al. (1991) reveals that allowing the patient to fully describe his/her symptoms so greatly aids rapport, communication, and diagnosis that blood pressure decreases. The authors speculate that this reduction in blood pressure results not only from a more precise understanding of etiology and greater relaxation at check-ups , but also from the patient's sense of relief or unburdening of thoughts and concerns.

Affectivity

The most hotly debated physician characteristic that may influence patient adherence is affectivity. While many studies correlate friendliness and empathy with higher information recall and better adherence (Garrity, 1981; Meichenbaum and Turk, 1987; Stoeckle, 1987), some recent studies cast doubt on these seemingly self-evident conclusions. Roter's 1984 study, for example, reveals that negative affectivity in tone (seriousness rather than warmth, lack of nodding , more blank stares, etc.) plus neutral/positive affectivity in words (not mumbling, not cutting off patient's words, etc.) contributes the most to treatment adherence. Furthermore, Kaplan et al. note that more negative affects such as doctor anxiety, expression of tension, and even self-consciousness are associated with better patient health status (1989). These theorists hypothesize that patients may take their doctors more seriously with such negative affects or believe that they care more about patient health outcome (Bartlett, 1984 ; Roter, 1984; Kaplan et al., 1989). As Davis writes, "If the friendly doctor's authority is undermined, the patients may be as likely to accept the advice of a friend as to accept that of the doctor." (in Stoeckle, 1987, p. 316) Another study shows, however, that while physician friendliness does not actually enhance likelihood of following treatment recommendations, lack of friendliness may impede adherence (Davis in Stoeckle, 1987).[4]

While most individuals want their physician to be attentive to their questions and concerns and to provide them with useful information, many patients are reluctant to ask questions or even to admit they do not understand an issue. In an entire appointment, patients spend only 5-10% of the time asking questions, with an average of only four questions per visit (Roter, 1984). Svarstad (1974) similarly notes that 43% of patients ask no questions during visits while 22% asked only one. Forty-four percent of patients admitted to saying nothing when they had no idea what their doctor was talking about and 33% pretended to understand the doctor's words.

This reluctance to probe for answers or to admit lack of understanding, according to Roter, is due to patient's fear their doctor will think they are

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[4] Davis also found that adding a few jokes helps to make the medical encounter less intimidating and patients are more likely, for example, to return for follow-up appointments.

stupid, or that the doctor is too busy or too important to be bothered by silly questions. In addition, several studies conclude that physicians may use bodily cues (such as lack of eye contact or standing up to approach the door before the question/answer segment of the appointment is complete) to thwart patient questioning or discussion (Matthews and Feinstein, 1988).

Attentiveness/Proximity

While scholars offering a critique of the culture of medicine[5] believe the portrayal of physicians as demi-gods elevates them to an infallible level, others notice that many doctor-patient bonds emphasize informality. Patients continue to express more satisfaction with the physician who, for instance, engages them in interactive dialogue rather than performing multiple history-taking and referring to charts in front of them. Furthermore, patients have higher information recall when the attending physician spends most of the visit within three feet of them (DiMatteo et al., 1993).

Several fundamental issues related to physician attentiveness remain unresolved. Researchers debate whether spending more time with a patient enhances adherence (Bartlett, 1981; DiMatteo, 1993). It may be the case that patient perception of the physician spending inadequate time or rushing off is more deleterious than the actual number of minutes spent interacting. As one of Randall-David's disgruntled informants noted about a very busy doctor, "half the time they're so rushed you can barely see their fur fly by." (1985, p. 105)

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[5] Starr (1982) explains the "culture of medicine" theory, documenting the elevation of physicians and "scientific medicine" and concluding that we have become mesmerized by a system that claims to be based on empirical truths and ever-increasing knowledge. In a culture that refuses to accept the inevitability of death, the physician has become a God as science seems to supplant religion in our increasingly technological society. An ever-increasing salary, perhaps commensurate with our ever-increasing expectations provides evidence of this status. In the 1930s, physicians earned one and one-half times the mean salary. From the 1950 to the 1980s, a doctor brought home four to five times the average national salary (Stoeckle, 1987,p. 73). Culture of medicine advocates posit that as physicians have become more all-powerful, patients have become more submissive and passive (Lewis, 1966; Cockerham, 1986).

My study sample estimated that their consultations average 13 minutes.[6] While there is no statistical correlation between duration of consultation and adherence, more of those in the low adherence group spent fewer than the mean number of minutes in consultation, while more of those high adherers exceeded the average number of minutes. It is also interesting to note that informants with a private physician spend more time in consultation than those using the public health clinic: over two-thirds of participants exceeding the mean consultation length had private physicians. Also unsurprisingly, those who spent more time talking with the physician were more likely to name their doctor as their main information source. Seventy percent of those spending more than the mean number of minutes, as opposed to only 40% spending under the mean, listed their physician as the main information source. Those spending less time chatting with their doctor tended to obtain information from friends/relatives (24%) and other (20%), usually a combination of life experiences and "mother wit."

Personal attributes such as gender and education level, figure into who spends more time conversing with the physician. In my sample, three-quarters of the men spend under the mean of 13 minutes conversing, while almost half of the women talk with their doctors for more than the average.

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[6] I derived this mean by asking informants to estimate the number of minutes they spent in consultation with their physician. Accuracy of consultation duration is less important than perception of consultation duration since what I am attempting to ascertain is the informant's degree of satisfaction and how satisfaction relates to adherence.

Eighty-five percent of those participants with a primary school education, as opposed to 46% of middle and 62% secondary school educated informants, spend fewer than the average 13 minutes conversing with the physician.

Scholars repeatedly question whether physicians who spend 13 minutes with a patient can adequately assess their patient's progress, particularly in the realm of treatment adherence. Morisky et al. discovered that fewer than one-half of physicians could predict a patient's adherence level (1986). Clark's research (1991) indicates that physicians usually cite incorrect reasons for nonadherence. For example, while 39% of doctors blame high price of medicines for nonadherence, only 6% of patients similarly cite inability to afford medication. Similarly, 34% of physicians, but a mere 11% of their patients, attributed nonadherence to medications' side effects.

Even more indicative of gaps in patient-practitioner communication, 46% of patients claim their nonadherence was due to the doctor telling them they were cured and to terminate medication use (Clark, 1991). No doctor interviewed for Clark's study claimed to have made this recommendation: the confusion probably resulted from such physicians' statements as, "Your blood pressure looks good" or "is under control," taken by patients to mean that they had gotten over their "bout" of high blood pressure. Similarly, one of Randall-David's diabetic informants believed that the physician had recommended eating lots of candy when most probably he advised her to eat sugar if she was having a hypoglycemic reaction (1985, p. 104).

Like Ivan Illich's Medical Nemesis, which offers the critique that physicians undermine self-help and reduce patients' autonomy, some research concludes that physicians lack of awareness of their patients' needs and other undesirable characteristics reduces their patients' success with adherence. The study undertaken by Kaplan et al. 1989 concludes that patients who perceive their doctor to be controlling (i.e., monopolizing conversations, frequently interrupting, rushing off before the patient expresses his/her concerns or questions) were more likely to have a greater number of days lost from work due to illness. Bartlett (1984) and DiMatteo et al. (1993) confirm that individuals feel discouraged and frustrated when a doctor reads their medical chart in front of them. In extensive interviews with hospital patients, Matthews and Feinstein note that people become disenchanted and feel that physicians who seem to lack personal concern, use "abstruse" language, and fail to inform the patient about the need for or timing of procedures diminish their confidence in that doctor (1988). Finally, DiMatteo and DiNicola (1982) note that interviewees take direct action such as ignoring advice or switching physicians if they perceive their doctor to be too busy or disinterested.[7]

Table 7-1 refutes this notion of physician ignorance of patient's adherence level in my sample: most physicians were able to closely predict their patient's adherence level. Physicians predicted 100% and 93% of those in the low and high adherence group, respectively. (For this correlation, I removed the physician's perception of adherence from the overall adherence score: thus, adherence was measured according to fat and sodium intakes as well as weight reports).

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[7] To present a balancing perspective to this discussion, Levison's 1993 study indicates that physicians attribute most of the communication problems to their patients rather than themselves. The most often cited reasons for interaction frustration include a patient's lack of trust or agreement, too many problems, feeling overly distressed, lacking understanding and adherence, being too demanding and controlling and/or having "special" problems.

Table 7-1: Physician's estimation of patient's adherence level by actual adherence level.

Dr. estimated adh. level	Adherence level high	medium	low	total
high	93%	7%	0%	100%(13)
medium	8%	77%	15%	100%(13)
low	0%	0%	100%	100%(15)

p=.0001, n=41, g=.872

Demographics of Practitioner

Gender, ethnic background, and age of practitioner may be a factor in adherence decisions, but few reliable and valid studies document these variables (Meichenbaum and Turk, 1987). Snow found that many of her study participants reject orthodox medical treatment because of mistrust of white practitioners. One informant declared that "my system ain't never been poisoned by no medical doctor" (1993, p. 70) while another noted,

> Now my doctor is white, so I tells him some and I keeps some. All these doctors wants to do is cut you or starve you. Shoot! I works harder than the young devil I goes to! These whitefolks don' care nothin' bout you and me and they don' want to see us flerishin'. That's why so much of that medicine they're always talkin' about is against us. These doctors ain' nothin' but whitefolks too (1993, p. 70).

Snow's intensive study of elderly African-Americans' attitudes toward their doctors revealed attitudes I never encountered in my research. Several of my study participants have maintained a relationship with an elderly black physician despite his practice's move 40 miles to the east. However, despite varying age, sex, and ethnic affiliation, most people express a very positive perspective on their doctor.[8] In fact, the primary public health physician is a very young, fair haired woman who has garnered the respect of all the women and nearly all the men in my study. My research supports what many scholars have concluded: if a physician fulfills certain patient expectations, such as clear and positive dialogue (Cassata, 1978), cultural sensitivity, perceived quality of care, and mutual respect (Caggiula and Watson, 1992), his or her ethnicity is relatively unimportant to the patient.

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[8] In fact, only one person in my study repeatedly reported dissatisfaction with her physician. She had been employed as an L.P.N.. and resented the doctor's

With increasing use of the "medical mainstream" due, in part, to Medicare, Medicaid and employer provided health insurance, most African-Americans pursue "mainstream" health care mostly provided by white HCPs. As Jackson notes, "My informants saw M.D.s as the legitimate and most trustworthy sources of medical care. In many places, the M.D. is higher in status than the minister" (1981, p. 93). Randall-David's study found that 93% of informants said they would see a physician first if they knew they had HBP, while only 3% said they would opt to see a minister (1985). Weidman's 1979 study in South Florida found that only 6% of blacks would seek advice from traditional health professionals like healers and root doctors.

Despite this overall acceptance of mainstream HCPs, cultural background remains a determinant in patient-physician interaction, but perhaps more as ethnicity relates to patients (Suchman, 1964; Kleinman, 1980). O'Hair et al. (1987) discovered that ethnic groups are more likely to implement treatment recommendations if the physician employs a particular communication style. O'Hair concluded that African-Americans prefer physicians who are highly affective (warm, empathetic) and less informative while many white Americans prefer those who are less affective and more

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withholding information that she felt she would understand. For example, when he took a blood pressure reading he would tell her that "it looks good", but decline to provide her with the numbers. She was so angry with him that a few months after our interviews, she had switched physicians.

informative. In addition, Chubon (1989) reports that while most patient-physician communication is characterized by a submissive-dominant role, African-Americans are especially likely to be subordinate when interacting with a physician. Chubon speculates that this subordination leads to patients to agree with the doctor even though they might not understand him/her or may disagree.

My study, however, does not statistically validate the relationship between demographic factors of the patient and perceptions of the physician. There is no statistically significant relationship between perceptions of the physician-patient relationship and household income, treatment duration, educational attainment, sex, household composition or age. This lack of correlation for age is surprising since most literature characterizes older African-Americans as subordinate to whites, particularly those in powerful positions. One might speculate that the older group would be disproportionately appreciative and evaluate their physician highly in light of this subordinate role.

Mutual misunderstanding of etiology, treatment, and simple terminology, such as "fresh" (see Chapter 3 on dietary patterns) may result in poor communication and possibly health outcomes. Many scholars suggest this lack of cultural understanding would be minimized by increasing the presence of African-American HCPs. Although few blacks have achieved the "starring role" of a physician, [9] many other health care workers are blacks and other minorities. For example, 74% of the Randall-David's (1985) study of rural low income blacks said they knew someone employed in the health care profession whom they rely on for information. As previously mentioned, in my study almost three out of four of my informants have a child, grandchild, niece or some other close family member employed as a nurse, nurse's aide, or some type of hospital staff member. Not only does this possibly increase a biomedical orientation, but it may also encourage adherence, enhance the patient/staff rapport, and demystifying medicine (Freidson, 1960).

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[9] Black enrollment in medical schools is disproportionately low compared to their presence in the population. Blacks comprise 6.6% of medical students in 1991-2, a .7% increase from 1981-2 (National Center for Health Statistics, 1994, p. 209).

The Importance of Being Satisfied

Various studies substantiate the logical correlation between treatment satisfaction and heightened adherence and possibly health outcome (Ley, 1979). One study, for instance, demonstrates that the greater the satisfaction with a physician, the less likely an individual is to miss an appointment and the more likely a patient will be to relax and listen to instructions (Meichenbaum and Turk, 1989).

As Kaplan et al. (1989) remind us, however, satisfaction with medical treatment may not necessarily improve a person's health status. Their study reveals that those patients who were most satisfied with care were considered less healthy than dissatisfied patients. In addition, the investigation conducted by Woolley et al. of a heterogeneous group of 1761 patients undergoing treatment for a variety of acute conditions found that most people were satisfied with their physician's performance and care outcome even when their outcome was considered poor (defined as worse than the usual health status). While 97% of those patients with good outcomes compared with 78% of those with poor outcomes were satisfied with outcome and care. The authors speculate that such high satisfaction may be the result of patients believing their doctors cared and "did all they could" (1978, p.127).

My study community's high degree of satisfaction with their physician may primarily be attributed to an unprecedented access to medical care. Despite the continued prevalence of discrimination in medical treatment, the existence of "the slave health deficit" (Byrd and Clayton, 1992), and the much decried "third world" nature of many black health status indices, a relatively new and free public health clinic, basic health coverage through social programs and, to a lesser degree, pension and private insurance programs have undoubtedly improved health care access to rural southern African-Americans. With almost half (n=19, or 46%) of my sample never having visited a physician's office before age 50,[10] it is probable that participants are very appreciative of the accessibility of care, even if that care does not approximate that received by white urbanites with excellent insurance coverage.

Summary

Cross-cultural research validates the importance of the patient-healer relationship. In most healing traditions, the physician is expected to help restore health and provide information to minimize future illness episodes and the patient employs the valuable advice to his or her benefit. While a contemporary "critique of medicine" holds that Western physicians sacrifice their true knowledge of the patient in favor of costly and sometimes inappropriate technological innovations, most people in my study are highly satisfied with their doctor. Informants rate their physicians high in ability to communicate and impart important information, ease of interaction, sufficient time interacting and appropriateness of treatment. In fact, a mean office wait of 40 minutes, travel distance of 20 miles, and consultation lasting thirteen minutes do not interfere with patient satisfaction.

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[10] This excludes physician or hospital visits for pregnancy.

Scholars continue to debate which physician characteristics are likely to have a positive effect on patients and adherence. While my study did not focus on such behavioral attributes as affectivity, other characteristics like the practitioners' ethnicity and gender do not appear to influence my sample's satisfaction with the physician or their adherence level. In fact, my data do not statistically validate a correlation between satisfaction with the patient-physician relationship and adherence.

It appears, then, that while only a few statistical correlations exist (such as greater perception of sufficient time spent with the physician and patient satisfaction), my study participants show an overall appreciation for their physician. Furthermore, since most physicians seem to do a respectable job in predicting adherence level, one might assume a generally high level of familiarity between the doctor and patient. Perhaps this mutuality of expectations, as Szasz and Hollender term it, leads to a generally acceptable relationship. Or, since most of my informants have not had great access to the medical community over their lifespans, perhaps they are highly appreciative for any medical attention. In either case, while my instruments fail to statistically validate the association between good patient-physician relations and adherence to dietary recommendations, the high status afforded to the doctor may reinforce study participants' pre-established notions about how to conduct a healthy life.

CHAPTER 8
CONCLUDING SUMMARY AND RECOMMENDATIONS

In this final chapter I summarize this study's findings and offer concluding ideas and recommendations useful to future research and to health care practitioners wishing to facilitate treatment adherence among an African-American elderly rural population.

Summary of Findings

The study sample's adherence to physicians' anti-hypertensive dietary recommendations (decreasing salt and fat intake and, for two-thirds of participants, losing weight) was better than most literature predicts and, as I initially anticipated, probably does not vary much from the "cultural mainstream." While sodium intake remains excessive for most of the participants, the majority consumed fat within the recommended levels and successfully altered their weight, if directed.

According to most participants, modifying their diets to meet their physicians' recommendations, has not been excessively challenging. Many report simply "cutting down" and "leaving off" the foods that they consider particularly damaging to their health. While some participants seek out "low salt/fat" foods, few follow any written diet plan or refuse to eat out at restaurants and almost no one alters recipes to conform to anti-hypertension guidelines. Study members also employ some unconventional strategies such as dousing pork in vinegar or accompanying other "rich" foods with an astringent substance like brine to reduce fat. Sodium modification strategies include "boiling out" the salt from cured meats, serving food hot to enhance flavors, and using substitutes like "lite salt" and "Mrs. Dash." Informants usually report that they have achieved weight loss by choosing lower calorie foods, altering preparation styles (e.g., baking rather than frying), and eating less frequently or eating smaller portions. Many participants indicate these modified consumption patterns are less deliberate attempts to change eating styles than the result of such "life circumstances" as reduced appetite due to advancing age.

My data do not reveal correlations between many predicted determinants of adherence. While the model presented in Chapter One (Figure 1-6) attempted to incorporate numerous potential determinants of adherence, few of the immediate or intermediate variables were significantly associated with the dependent variable, adherence. As with many models, its utility is limited because it does not allow much overlap between the boxes or potential determinants and because the factors also influence each other. Of the numerous sociodemographic factors tested (age, gender, household income and composition), only education and treatment duration were significantly associated with dietary adherence. Education was positively associated with adherence while treatment duration was inversely related to adherence.

Alternative or nonbiomedical health beliefs, included in the model under the headings of perceived susceptibility to and severity of disease, also did not appear to have a direct relationship with adherence. Health orientation, thought by many researchers to be the basis for lack of dietary adherence among African-American hypertensives, is a complex issue. While my hypothesis stating that the sample holds a "mainstream" health orientation was not completely confirmed, most informants do maintain a biomedical awareness. For instance, most participants cited numerous biomedically-oriented etiologies and treatments for hypertension. On the other hand, most participants expressed a belief in nonbiomedical ideas such as alcohol as a cause of HBP and "supernatural" methods of controlling HBP. Contrary to much of the existing literature, my study sample's health locus of control leans in an internal direction (i.e., participants perceive the responsibility of health to be in their own control) and most study participants accept the idea of the chronicity of hypertension.

It appears that "traditional" perspectives on HBP sufficiently converge with biomedical beliefs to insure a certain level of compatibility. For instance, one informant's warning that "some of everything can go wrong when you're too fat" holds the same underlying truth as the HCP's advice to lose weight. The "traditional" belief of balance in ones input and output (diet and energy levels) reinforces HCP's recommendations for dietary diversity, moderation, and physical activity.

While the literature suggests that external influences, such as social support mechanisms, medical discrimination, and financial barriers to adherence, influence health orientation and behavior, the effect of these influences among my study sample is either statistically insignificant or undetermined. My initial prediction of a relationship between social support and adherence was not confirmed. Since almost all study participants feel a high level of support, statistical insignificance may result from no "low support" comparison group. Additionally, it is probably that since intake modification is not perceived as a formidable task requiring the assistance of others, most participants do not rely on others for help with following a recommended treatment regimen.

Informants listed an average of eleven "helpful/important" persons and indicated they feel extensive affective, informational, and instrumental assistance from these individuals. Most noted they had contact with these helpers either "frequently" or "everyday." However, my data reveal no association between any of these social support indicators and adherence to treatment recommendations. Furthermore, there were no differences in adherence levels between those who received food-related assistance (i.e., purchasing, preparation, dining companionship) and those who did not.

The lack of association between social support and adherence level repeats itself in the patient-practitioner relationship. Like those "helpful/important others," informants perceive their physicians as accessible, helpful, and as great providers of information and, as the model indicates, certainly a factor in the perceived efficacy of treatment. Yet, there is a similar lack of statistical correlation between perception of the physician and adherence level. Again, I speculate this results from the overwhelming majority of informants maintaining a very positive perspective on their physician. There were no statistically significant differences between level of adherence and travel, waiting, and consultation duration. Furthermore, while my study did not assess physician's personality styles, (affective, emotive, etc.,) study participants claimed physician's personal attributes such as gender and ethnicity made no difference in their level of acceptance.

Study participants rated most of their doctors highly on ability to communicate, competency and accessibility (allowing sufficient time for examinations and questions). While most informants spend much time traveling to physicians' offices (20 miles) and waiting in the office (40 minutes) and only a perceived average of thirteen minutes in consultation, most cheerfully accepted this arrangement. I speculate that participants' overwhelming acceptance of and appreciation for their physicians results from their relatively recent access to biomedical services.

Access to medical services, as the Chapter 6 on economic issues states, does not constitute an impediment for most study participants. The community's proximity to a major university medical center and many other hospitals and clinics increases care options. Government programs such as Medicare, Medicaid, and public health clinics have also unquestionably increased my study sample's medical access. While practically every participant lives near or below the federal poverty level, these government services coupled with the greater likelihood of receiving pension and insurance benefits upon retirement, enhance the likelihood of biomedical care.

There is no statistical significance between income level and number of annual physician visits. With an average of five visits to the physician's office annually including visits to the public health clinic, most informants seem to be medically well served. Women and those with higher education are particularly likely to make numerous office visits. As mentioned, a key factor in this accessibility is the nature of the surrounding community. The nearby metropolitan area has an abundance of medical facilities, including a medical school/teaching hospital, the regional Veteran's Administration hospital, and two other large medical centers. In addition, almost half of the study participants, particularly those with the lowest incomes, use the town's public health clinic. In addition to being a "friendly" place, the clinic is a five minute walk for most study members.

While my study sample undoubtedly benefits from the particularly high level of medical facilities in University City and the town of H, issues related to the poverty status of most informants remain. Such issues include medical discrimination, the effects of lack of disposable income on food purchasing, and the much debated "culture of poverty." This final section offers recommendations, including those for future research.

Recommendations

To facilitate treatment adherence with the ultimate goal of enhancing well-being requires improvement of several areas. These include pursuing further research needs, altering some health care practitioner's approaches toward the study sample and dietary modification, and implementing constructive and relevant health care policy.

Further Research Needs

1) Measurement and definition problems have hampered the study of adherence to dietary recommendations. While there are many standard dietary recommendations, researchers should develop acceptable measures of dietary intake and assessment of adherence levels.

2) While there have been improvements in recent years, a traditional paucity of information on minority elders has plagued health research. Long-term community and population-based data collection is needed to further establish profiles of those at risk as well as those who have been successful with dietary modification

3) Researchers must avoid the temptation to solely rely on older ethnographic studies. While many studies from several decades ago retain fundamental truths about African-American samples, my work and others (Watson, 1984; Randall-David 1985) indicate that "traditional" health beliefs and practices have waned as this population has become more integrated into the national culture. Furthermore, while it is tempting for researchers,

particularly anthropologists, to emphasize "the other" or "the exotic," it is no longer accurate to characterize a heterogeneous population of millions by their forebearers' medical models.

4) More research on such "new" products as salt, fat, and sugar substitutes should be disseminated to HCPs and to the general public. Members of the study sample frequently expressed the idea that unlimited use of "lite" salt would not harm them, a questionable notion at best.

5) Researchers should investigate the effect of low income on food procurement. Are "high quality" foods such as fruits and vegetables really more expensive than "lower quality" choices? What factors do poor people consider and prioritize during shopping: food cost, ease of transport, shelf life, nutritional quality, taste, acceptability to household members? Lastly, are the Wall Street Journal's findings that markets in low income areas offer mostly "less healthy" products (i.e., higher fat and salt) applicable to all poor areas?

6) While it remains difficult to monitor the patient/physician interaction, new studies reveal a remarkable amount of medical discrimination. Investigators should use ethnographic interviews to assess the perspectives of both HCPs and patients. It may be necessary to require programs on cultural sensitivity as part of the medical and other HCP curriculum and/or as continuing education programs.

Recommendations for Improved Health Policy and Public Health Concerns

1) While my study sample has been quite successful in accessing medical care facilities, health-related and resource-originated problems plague the community. Policy makers should concentrate on eliminating these barriers to healthful food procurement, particularly the lack of transportation.

As Weidman's study indicated (1978), inability to shop for food on a regular basis compromises nutritional adequacy. Government food distribution programs are doomed to fail if those eligible have no means to transport the bags of oranges and 20 pound blocks of cheese.

Furthermore, while many study members have managed to call on helpers to transport them to medical facilities, an ever increasing elderly population is likely to encounter problems in such matters. These transportation difficulties are particularly problematic in rural areas (Dwyer, Lee, and Coward, 1991). It is likely that one of the reasons the study sample has such high access and utilization of medical services is the public health clinic's proximity to most informants.

2) This study is not unique in its finding that the older African-American population had higher than anticipated level of adherence. Recent NHANES data similarly reveal that many older blacks' diets fall within recommended guidelines as well as minimal differences in black/white consumption patterns among elders. In addition, since the average age of my study participants approximates life expectancy, it is probably more useful to spend time and resources to enhance the health of other age groups. To design programs that target younger adults, many of whom die prematurely due to hypertension-related causes, seems more efficacious than attempting to alter the diets of people whose advanced age proves they are either very lucky or have relatively healthy habits.

As Table 8-1 indicates, this younger cohort, and particularly women, is more likely to gain weight during the younger adult years. By the time people turn 65, there is a minimal incidence of weight gain.

Table 8-1: Ten year incidence of major weight gain among adults 25-74 years of age, 1971-5 and 1982-4

Age	Male	Female
25-34 years	3.9	8.4
35-44 years	3.2	7.2
45-54 years	2.2	3.8
55-64 years	.9	1.7
65-74 years	.5	.9

Source: C.D.C. and P as cited in National Center for Health Statistics, 1994.

3) Health policy planners should encourage organization on a "grass roots" level. Since altering one's consumption patterns involves much more than health care facilities and access to treatment, agencies should involve local organizations and dynamic community leaders in a variety of health-oriented activities. Individuals, for instance, may benefit from creating a project such as a cookbook or a community dinner that highlights "healthy dishes."

4) Pre-existing organizations, such as the various churches, should be called on as an entry point for new programs. While this is not a new idea (Kong et al., 1982), since most older African-Americans are affiliated with and trust churches, new health promotional campaigns are more likely to be accepted than those launched from unknown organizations and individuals.

5) Public health efforts to disseminate information should be tailored to the appropriate sources of health news. Few among my study sample, for instance, rely on the written media for health information. Most study members use their HCP to provide health advice. With limited eye sight and reading ability, many older blacks may be unable to gain information from pamphlets or other written health resources.

6) Since this sample holds HCPs in high regard, investigators should study the feasibility of a visiting dietitian/nurse program. Three-quarters of

my study sample indicated that a HCP had changed their food intake, providing evidence of this respect for mainstream medicine and its practitioners.

Recommendations to Health Care Providers (HCPs)

1) HCPs should be aware that their advice and admonishments carry considerable weight among populations similar to this sample. The study community, relatively integrated into the "biomedical mainstream," with good access to health facilities, and excellent utilization rates, shows a reverence for HCPs. Since informants receive most health information from their nurses and physicians and show a strong propensity toward reaching recommended goals, HCPs must take responsibility for appropriately directing health behavior.

2) Appropriate direction involves recognizing and respecting ethnic differences. One excellent example from my research is the dual meaning of the term "fresh." While this study sample understands its "mainstream" use, "fresh" foods evoke undesirable and insipid images. As another example, non-southern white HCPs working may encourage liberal consumption of "greens," traditionally prepared with a large quantity of bacon and fatback.

3) On the other hand, it is imperative that HCPs incorporate familiar foods when they construct diet plans for this population. Though over one-half of the study sample received plans, few followed them due, in part, to inappropriate or unfamiliar foods. HCPs must encourage consumption of such "high quality" traditional items such as sweet potatoes, cornbread, grits and buttermilk. In addition, HCPs should consider modifying traditional dishes that offer sound nutrition such as fried fish and chicken, greens, stews and desserts.

4) HCPs working with an older African-American population should reconsider weight loss recommendations based solely on weight for height measurements, such as the Metropolitan Life standards. Not only are such standards based on a younger population, but such measures may not be appropriate for African-Americans (Cassidy, 1994). Indices such as the body mass index (BMI) or skinfolds may better assess obesity.

5) HCPs should make every effort to incorporate community "success stories" into dietary intervention strategies. Community members who have modified food intake and possibly lost weight as recommended should be encouraged to share their strategies through support groups or organized activities.

6) HCPs should invoke familiar health-enhancing strategies such as moderation and balance in diet, activities, and life. Most medium to high adhering study participants indicate that they have simply "cut down" or modified their intake rather than completely changing their diets. In addition, most study participants believe that older individuals who have decreased their activity level do not need as much food.

Throughout this dissertation, I have attempted to address my two guiding hypotheses-- that understanding any health behavior requires a multifactoral perspective on decision-making and that no group of individuals remains static in their health beliefs and activities. While health behavior researchers continue to debate the relative contribution of factors investigated in this study, individuals rely on their own internalized, reasoned equation to pursue a course of health behavior. Among my sample of older blacks living in a rural setting, decisions to follow physicians' guidelines on dietary therapy for hypertension similarly reflect much more than "cultural attributes." "Traditional" health attitudes and behaviors, such as input and output balance and moderation, self-efficacy and self-reliance, and belief in the power of others (both the supernatural and the mundane, i.e., physicians) converge with "modern biomedical" beliefs to create a dynamic health perspective. In the words of my oldest (89 years of age at the time of the interviews) informant,

> It used to be that you couldn't get no doctors, except those midwives who came around when the woman's time had come (to have a baby). Or, maybe you'd go out to the woods and see that square-headed root doctor. But those old-timers are long gone now. And I'll tell you that I for one don't miss none of them. These doctors and hospitals and all that stuff we got today is a world of better. But, there's no sense in relying only on that because they (the doctors) can only help you so much. You got to do it yourself. Now, I don't mean all by yourself-you got your family, your friends, and most of all, you got God who'll help you. But you got all of these things to help, so you can live to be my age, if you're smart, lucky, and if the good Lord is looking out for you.

APPENDIX A
INSTRUMENTS

Ethnomedical Questionnaire (Modified Kleinman, 1978, Snow, 1983, and Randall-David, 1985)

I. Open-ended questions

1) What do you think caused your high blood pressure (HBP)?

2) Why do you think it started when it did?

3) What do you think you HBP does to your body? (How does it work?)

4) How severe is your HBP? How long do you think it will last?

5) What, if any, are the main problems your HBP has caused you?

6) Do you know anyone else who has HBP?

7) What do they do about it ?

8) Do you ever discuss you r pressure with friends or family?

9) What do they say?

10) Have you ever used home remedies? What kinds? Quantity, dosage, frequency, preparation techniques.

11) Do they help? Are you still using them?

12) What type of treatment do you think you should receive from your doctor?

13) How do you think your doctor can help you?

14) Do you think there is any way of preventing HBP in the future?

II. Closed ended-questions

"I am going to read you a list of what some people believe about illness and HBP. Please tell me if you: a) agree b) disagree c) do not know. Feel free to explain your answer."

1) If you lead a good and clean like you will rarely get sick.
2) Almost all diseases have a cure.
3) Some people get sick often while others always seem to stay healthy.
4) Most illnesses will be cured in a matter of time regardless of the treatments used.
5) If you become ill, it is because you live under a lot of pressure.
6) In the future, scientists will find a cure for all diseases.
7) Most people get sick because they worry too much.
8) When people eat right and take care of themselves, they seldom get sick.
9) Most diseases can be cured by a good doctor with the right medicines.

"Now I am going to read you what some people say about HBP. Please tell me if you: a) agree b) disagree c) do not know. Feel free to explain your answer."

1) HBP can be caused by:

worry, stress, aggravation
old age
evil spirits
not getting enough rest
God's punishment for sinful behavior
too much water in the system
too much salt on food (what's too much?)
working too hard
God's will/fate
living a fast life
being a nervous person
roots, hexes, magic
your genes, HBP runs in the family
keeping feelings inside
fatty foods
smoking cigarettes
drinking alcohol
being black
being overweight
no exercise

2) Signs of HBP can be:

breaking into sweats
feeling "swimmy in the head"
a pounding heart
emotional outbursts
feeling tense/nervous
racing heart
feeling faint
headaches
ringing in the ears
nose bleeds
feeling no signs

3) Ways of controlling HBP can include:

using home remedies
reading the Bible
getting exercise
losing weight
objects
living the "right" kind of life
taking over the counter medicine
praying, going to church
staying away from certain foods
taking your prescription
relaxing/resting
using certain lotions
eating certain foods
using herbs & roots
laying on hands
wearing certain

24-hour Dietary and Activity Recall

"Please try to remember everything you did, ate and drank yesterday. We'll go by the time of the day to help you remember."
7 am (or earlier), 7:30 am...11:00 pm (or later).

Household Structure and Responsibility Survey and Economic/Health Access Survey

1) Please list everyone who currently lives in this (your) house.
2) Please explain their relation to you and their ages.
3) Has this structure changed any over the past five years?

4) How long have you lived in this house?

5) Where and with whom did you live before?

6) Who does most of the food shopping for the household?

7) Who does most of the cooking for the household?

8) Do you and other people in the house eat together? How many meals a day or week?

9) Do any of the people in your household have special diets? What kinds?

10) Does everyone in the household eat the same kind of food?

11) Please indicate what how much money you make each year (show card):

<$5000 $5000-$7500 $7500-$10000 >$10000

12) Can you please describe what kind of health insurance you have? Medicare? Medicaid? Supplemental (what kind?)? Veteran's Benefits?

APPENDIX B
SUMMARY OF INFORMANT INFORMATION

Particip-ant #	Age	Gender	Treat-ment duration	Height	Weight 1(1990-1)	Weight 2 (1992)	Adh. level
1	78	F	24 yrs	5'7	253	268	low
2	74	F	6 yrs	5'2	143	157	med
3	80	F	15 yrs	5'2	145	133	med
4	65	F	8 yrs	5'5	135	133	high
5	81	F	10 yrs	5'1	165	170	low
6	71	F	3 yrs	5'7	275	290	low
7	79	F	8 yrs	5'3	120	121	med
8	77	F	28 yrs	5'2	190	192	low
9	66	F	2 yrs	5'4	145	132	high
10	68	F	17 yrs	5'4	245	250	low
11	65	F	10 yrs	5'4	148	146	med
12	67	F	5 yrs	5'2	150	138	high
13	82	F	32 yrs	5'3	172	177	low
14	82	F	40 yrs	5'3	135	127	high
15	69	F	3 yrs	5'6	145	145	high
16	75	F	4 yrs	5'5	185	191	low
17	72	F	15 yrs	5'4	190	141	high
18	77	F	10 yrs	5'8	165	163	med
19	84	F	27 yrs	5'1	145	151	low
20	76	F	7 yrs	5'6	157	139	high
21	66	F	10 yrs	5'4	176	179	med
22	74	F	5 yrs	5'4	149	140	high
23	71	F	6 yrs	5'3	214	200	med
24	65	F	4 yrs	5'2	138	135	high
25	65	F	22 yrs	5'0	180	165	med
26	68	M	6 yrs	5'10	215	222	low
27	75	M	3 yrs	5'10	172	174	high
28	70	M	10 yrs	5'9	205	219	low
29	89	M	33 yrs	5'8	165	158	med
30	66	M	8 yrs	5'11	284	276	high
31	65	M	15 yrs	5'8	230	246	low
32	72	M	26 yrs	5'9	222	232	low
33	65	M	10 yrs	5'10	165	156	high
34	68	M	15 yrs	5'9	164	156	med
35	70	M	17 yrs	5'7	205	221	low

36	72	M	2 yrs	5'11	165	158	high
37	81	M	18 yrs	5'9	176	175	high
38	75	M	25 yrs	5'10	160	154	high
39	67	M	21 yrs	6'0	178	178	low
40	68	M	22 yrs	5'9	226	232	low
41	78	M	18 yrs	5'10	201	200	med

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BIOGRAPHICAL SKETCH

Nancy Ellen Schoenberg was born on February 29, 1964, in Jersey City, New Jersey. She received her Bachelor of Arts degree from Franklin and Marshall College in Lancaster, Pennsylvania, in 1985 in government and economic development. She completed her Master of Arts degree in socio-cultural anthropology at the University of Texas in Austin, Texas, two years later. During her doctoral studies, Ms. Schoenberg received support from the Department of Anthropology (as a teaching assistant), the Diabetes Education and Research Foundation (as the graduate research assistant under the supervision of Dr. L.S. Lieberman), the National Science Foundation (a dissertation improvement grant), the College of Liberal Arts and Sciences (a research assistantship and recipient of the Humanities and Social Sciences fellowship). She received her doctoral degree in anthropology from the University of Florida in 1994, with a interdisciplinary focus on medical anthropology and the political economy of health care. Her academic interests include African-American and Hispanic populations, gerontology, chronic diseases, political economy and health care access issues, stress and coping adaptation and cultural change. Her fieldwork areas include Denmark, France, the Texas-Mexico border region, Peru, and the southern United States, though her travels have taken her to many other lands. Nancy Schoenberg is married to anthropologist Mark Swanson and has a lively toddler named Rachel Schoenberg Swanson. Her future research interests involve subjective well-being and long-term care options for the rural elderly.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the Department of Anthropology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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